

Fig. 2

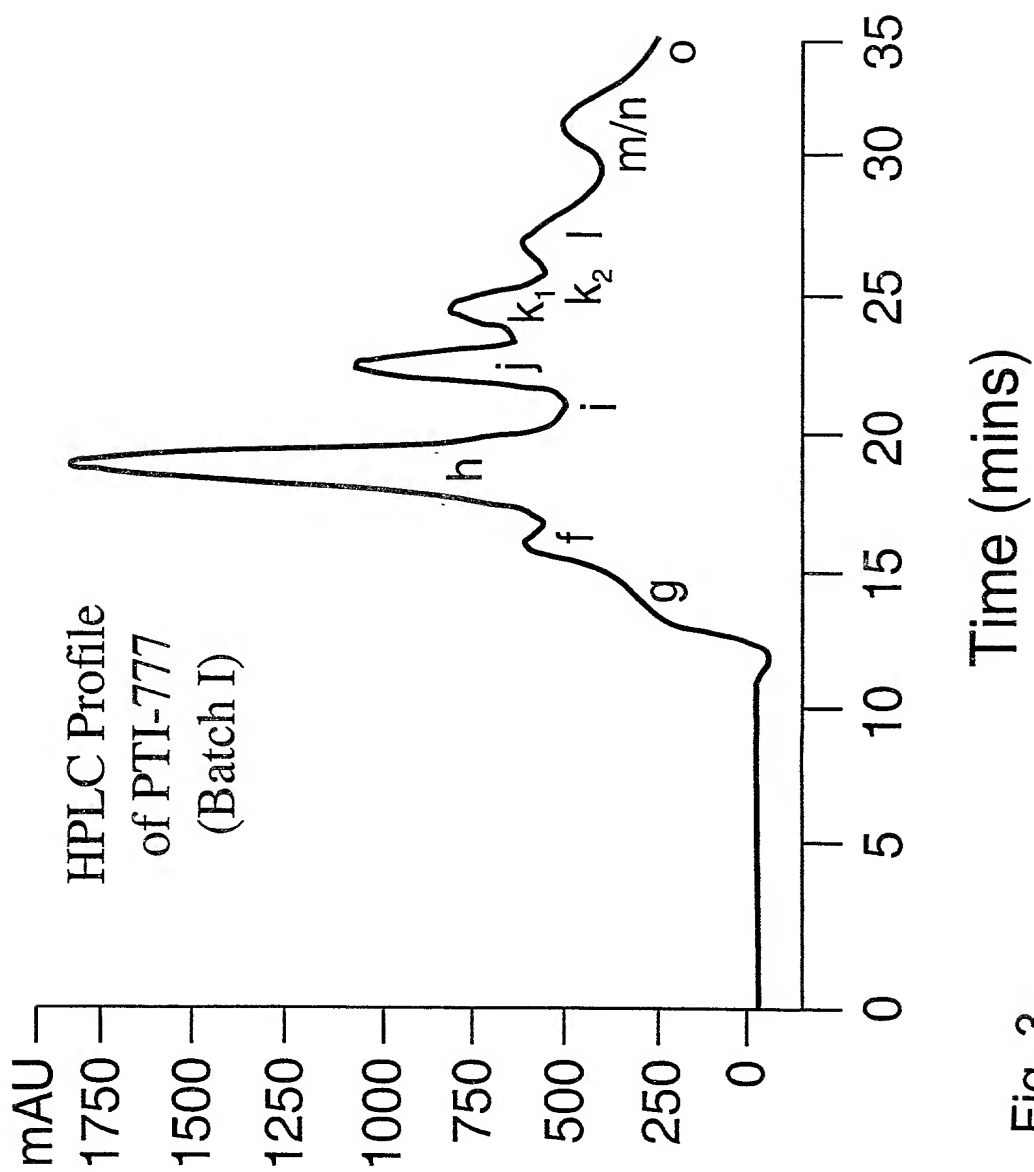


Fig. 3

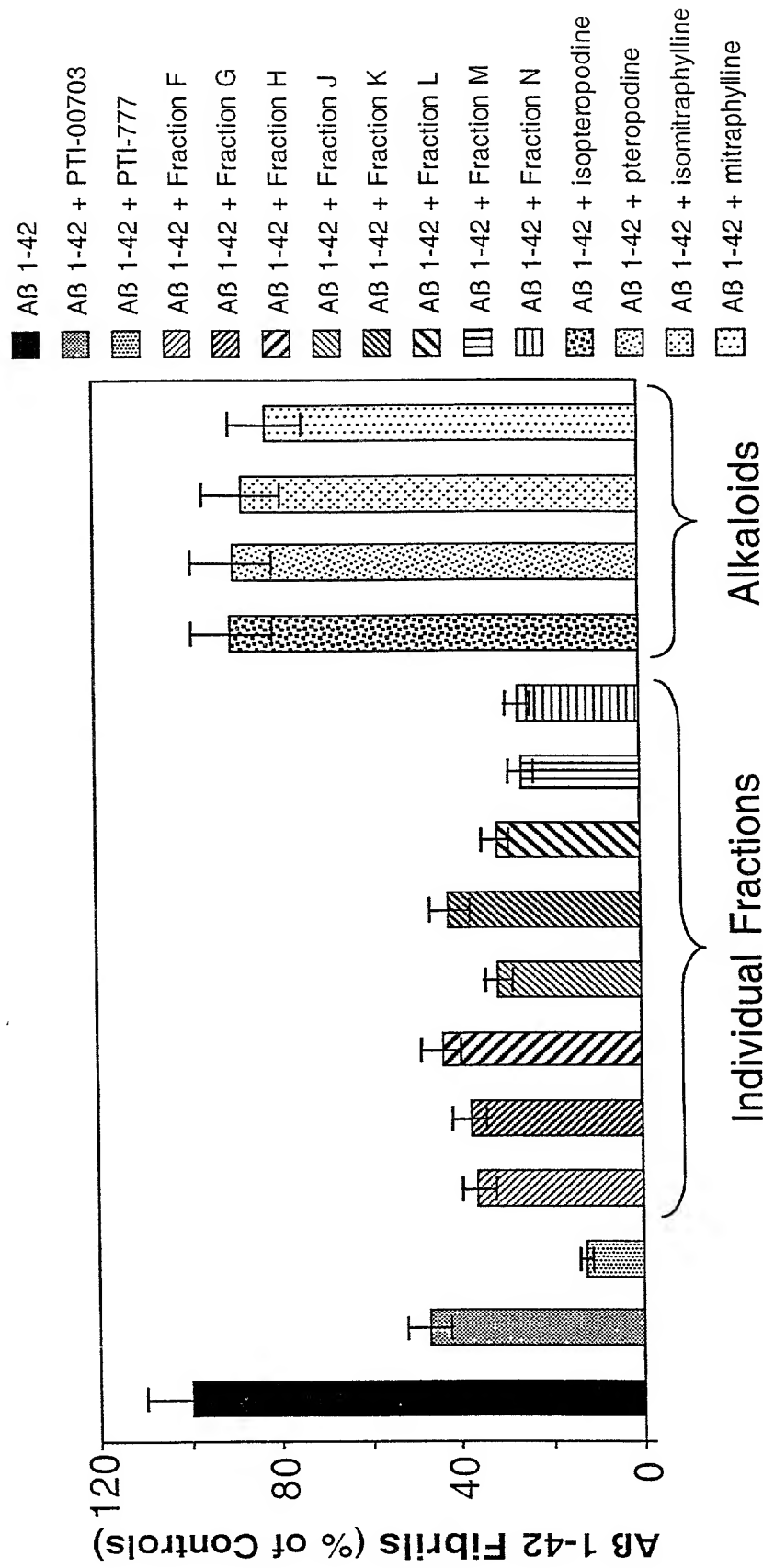


Fig. 4

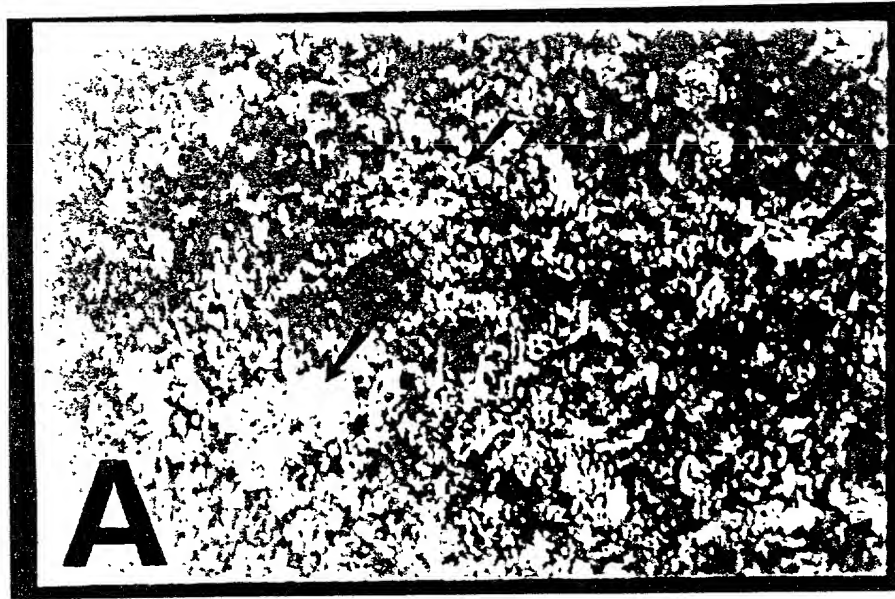


Fig. 5A

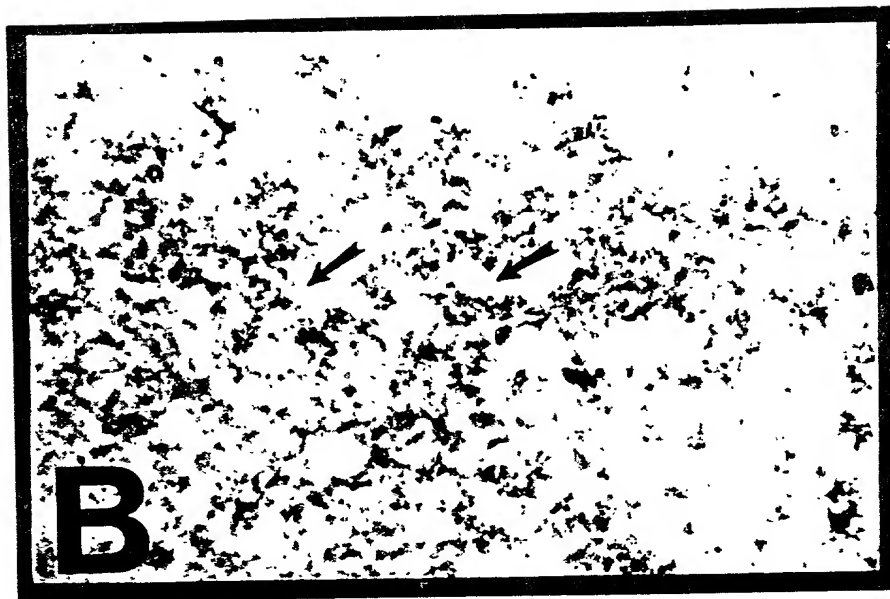


Fig. 5B

10053635-050702
20/050-525E5001



Fig. 5C

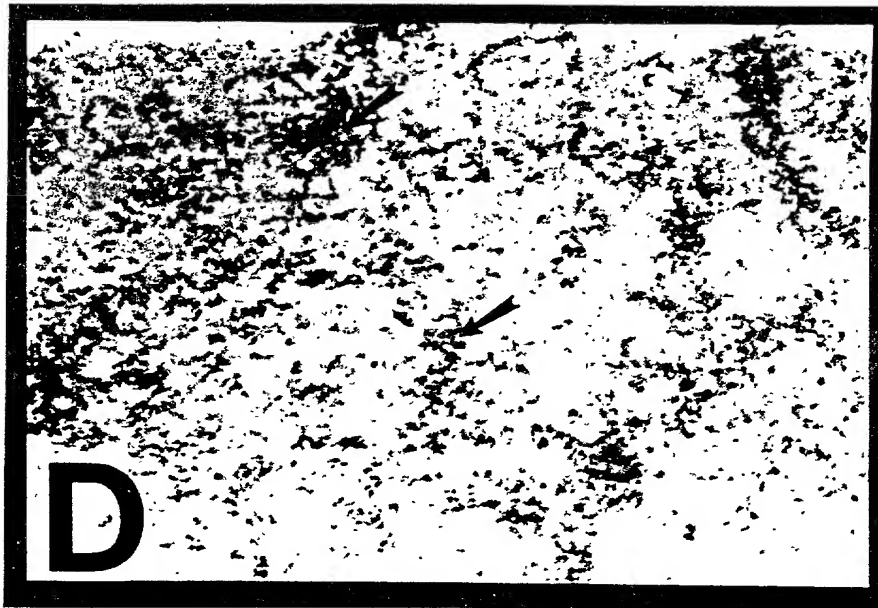


Fig. 5D

10053635 060703 202050 525E5001

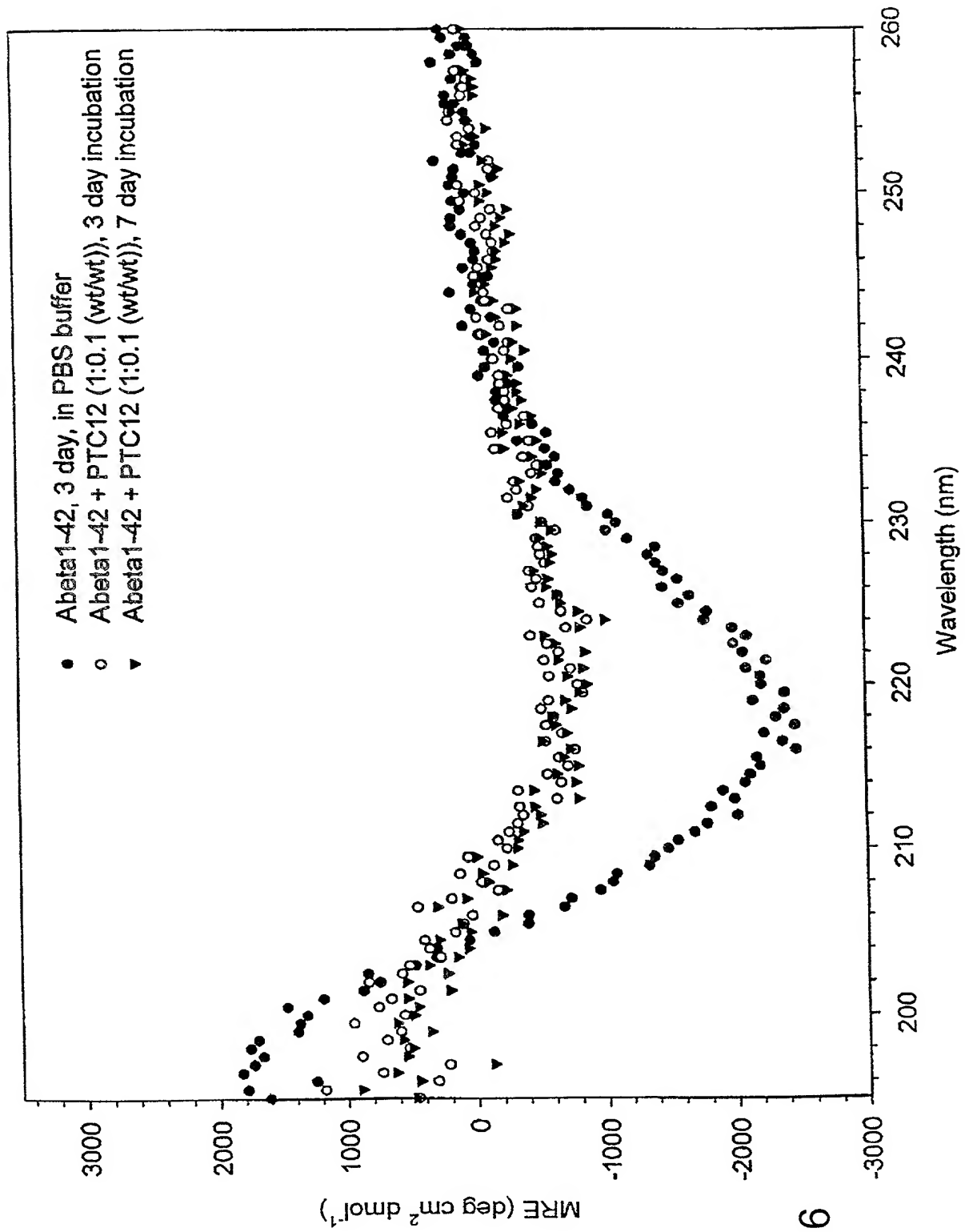


Fig. 6

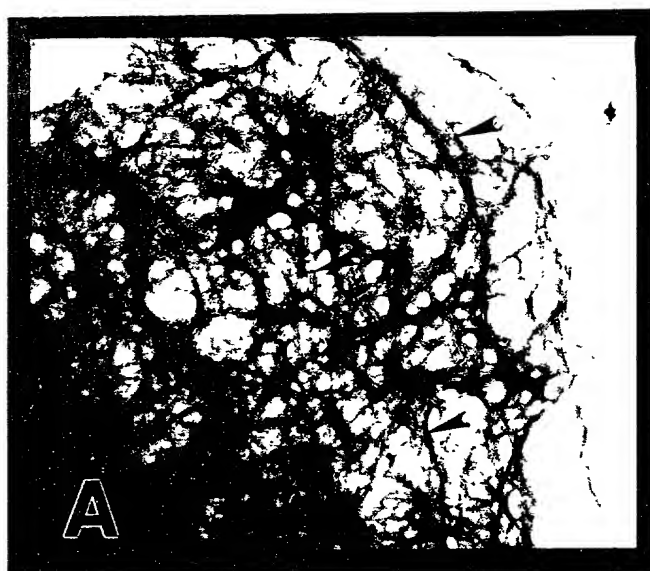


Fig. 7A



Fig. 7B

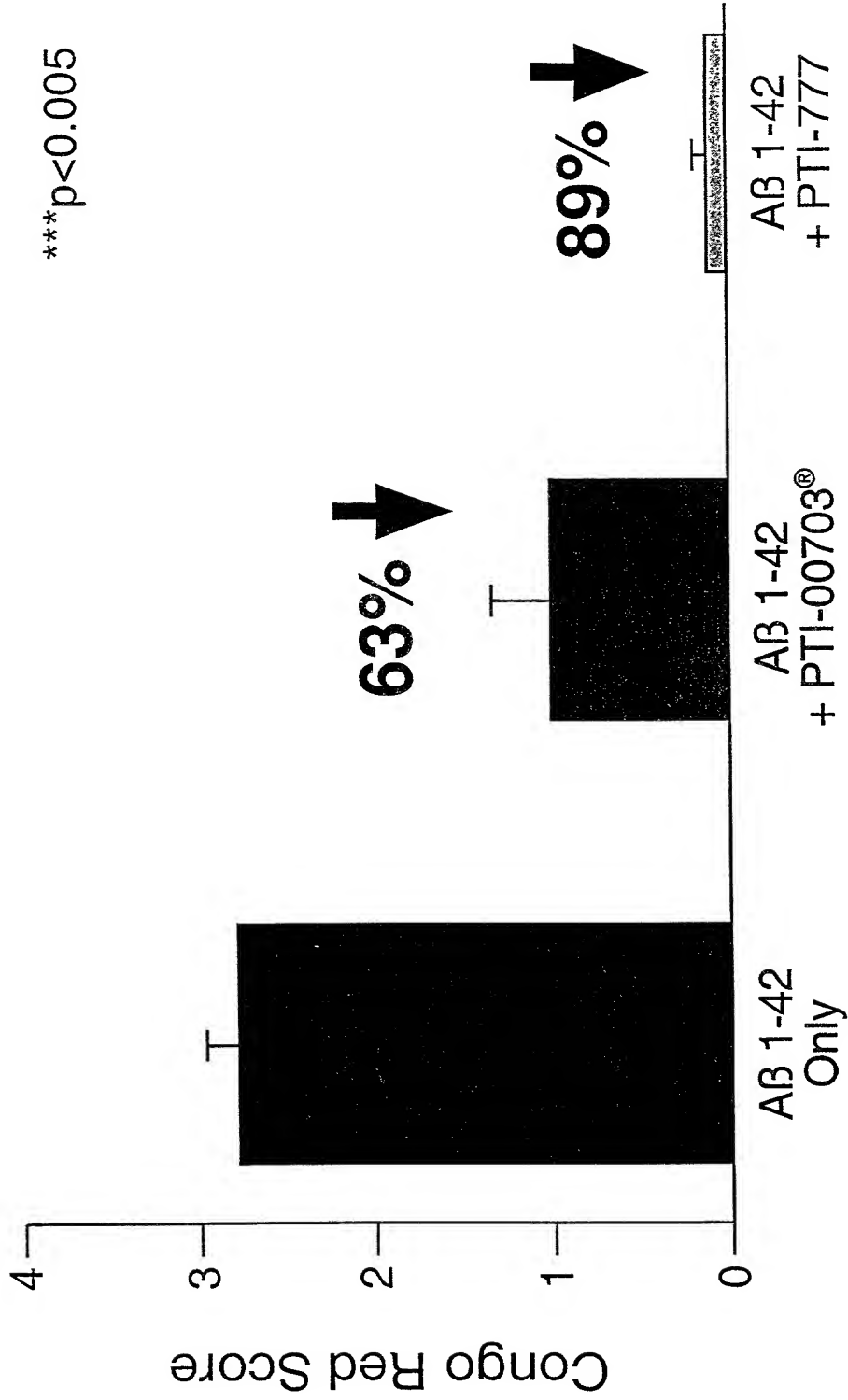


Fig. 8

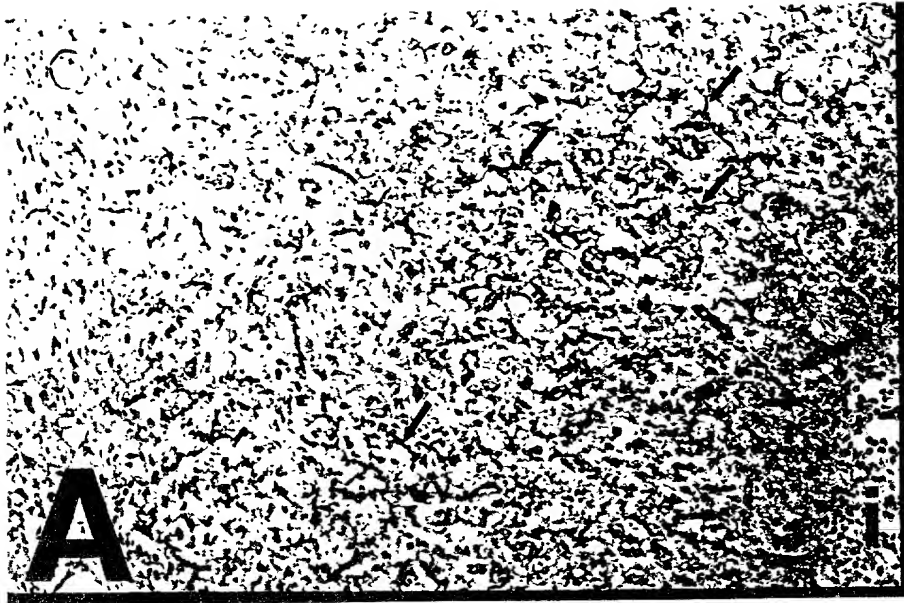


Fig. 9A



Fig. 9B



Fig. 9C



Fig. 9D

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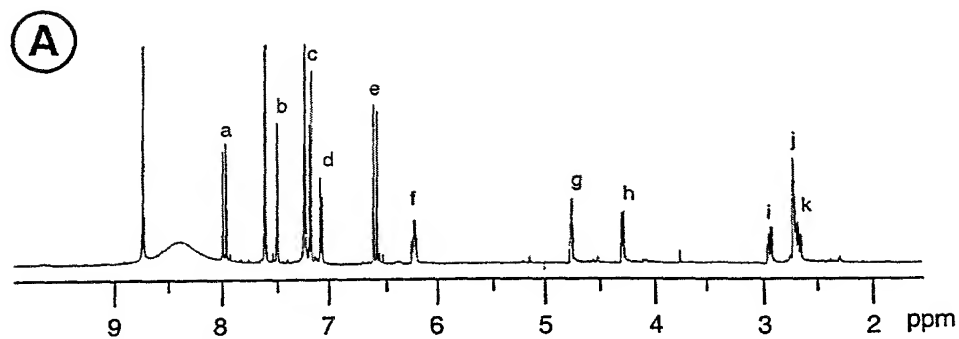


Fig. 10A

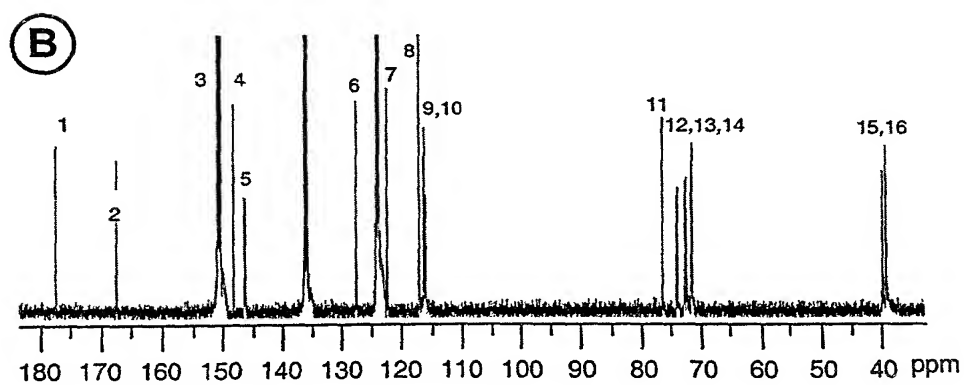


Fig.10B

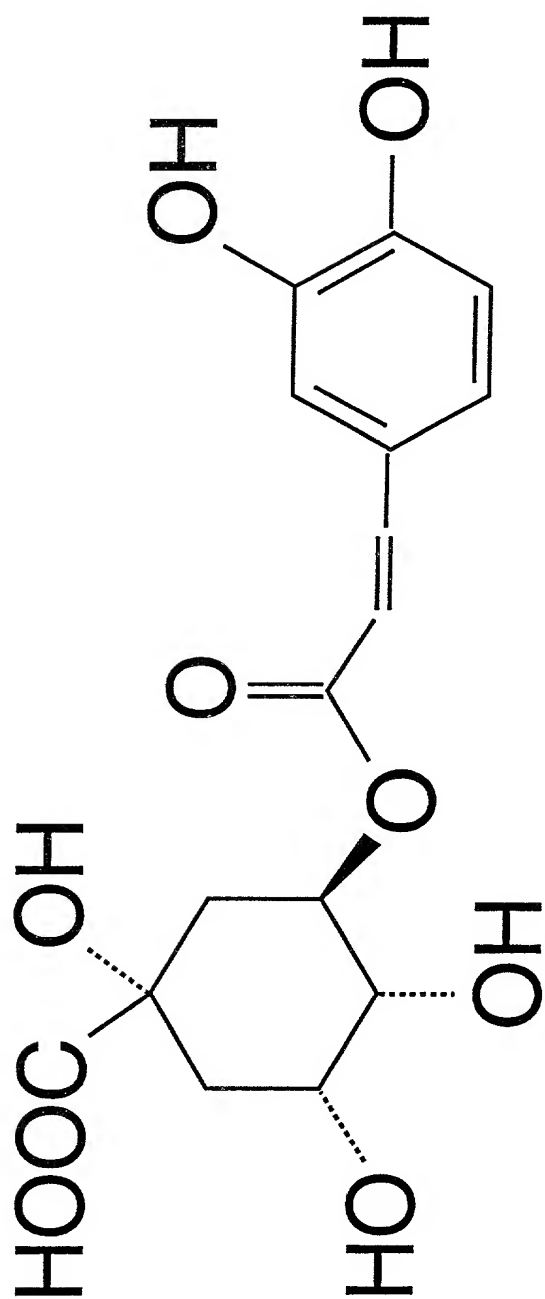


Fig. 11

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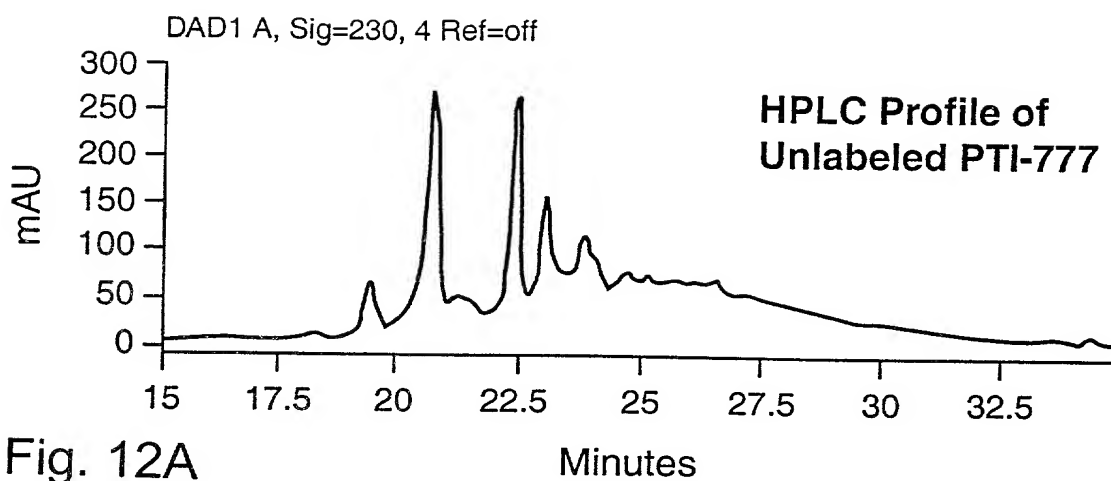


Fig. 12A

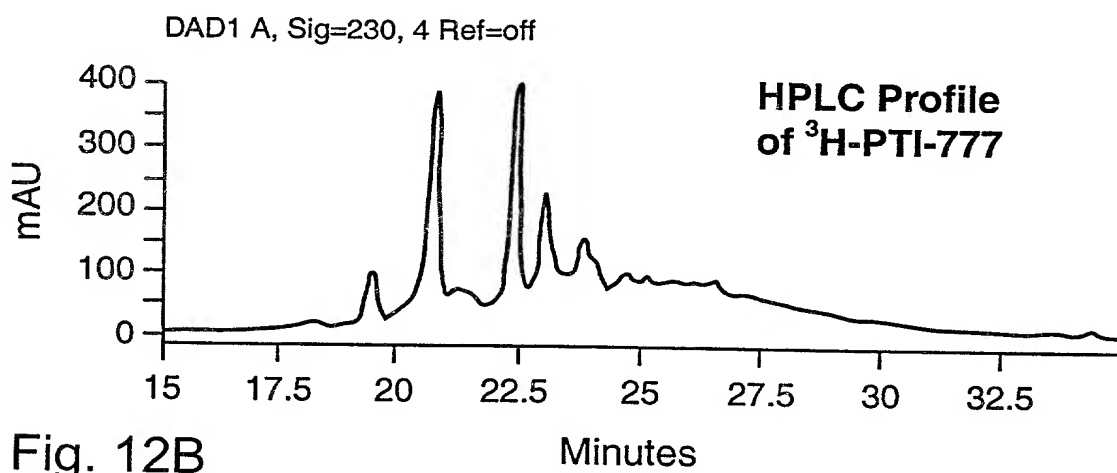


Fig. 12B

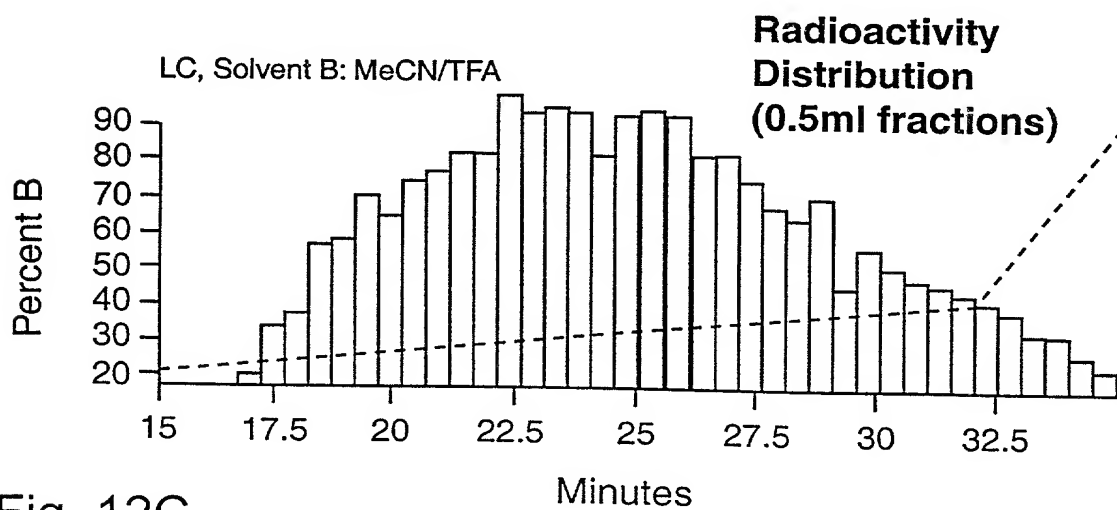


Fig. 12C

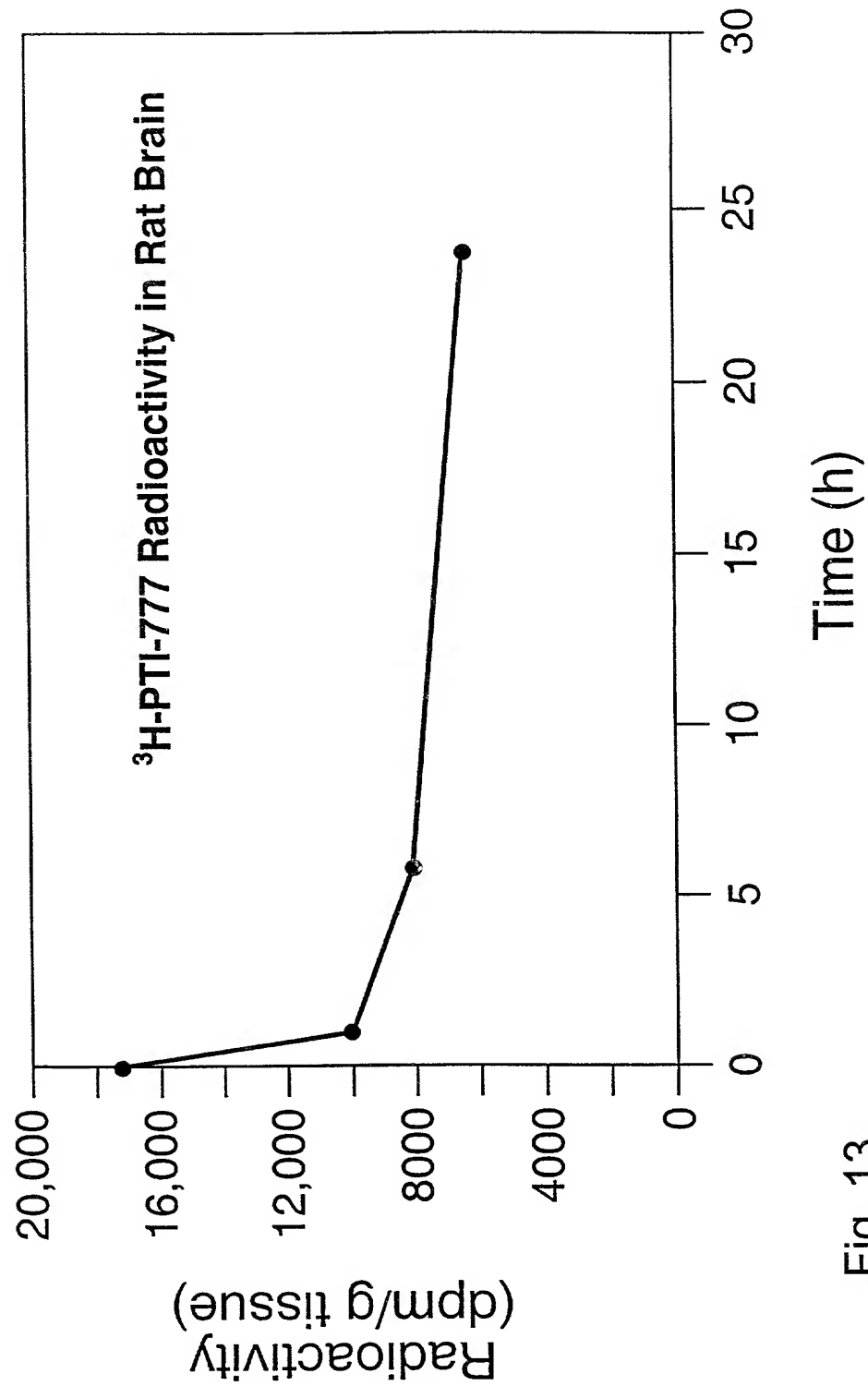


Fig. 13

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Jaguar Summed Mass Spectrum Report

File Name: G:_41.dat
Method Name:
Sample ID:
Instrument: JAGUAR

Time Run: 11/13/00 11:01:40 AM
Report Created: 11/13/00 11:03:26 AM
Operator:
Ionization Mode: ESI - positive ions

Spec # Range: 2706 - 2778

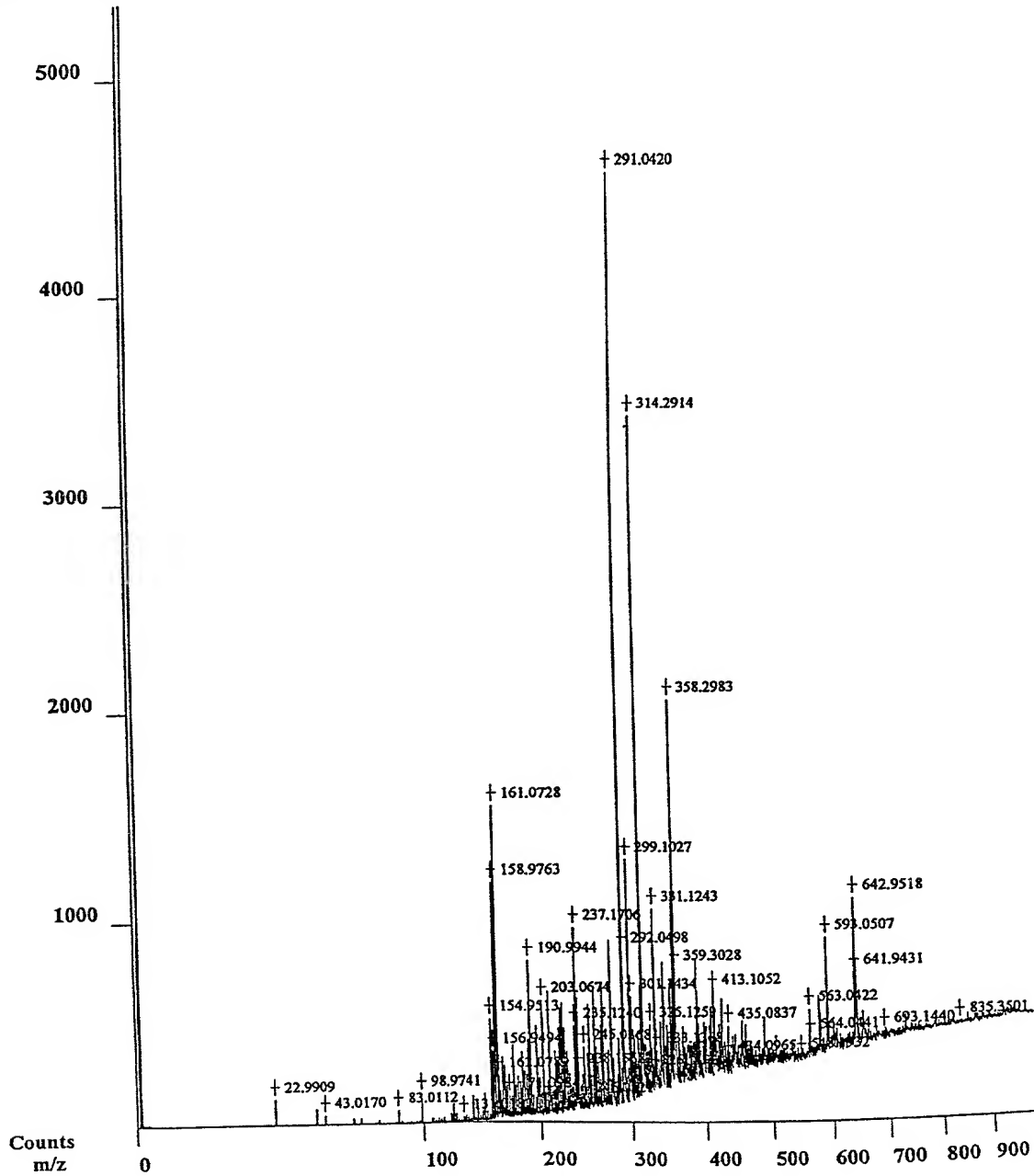


Fig. 14

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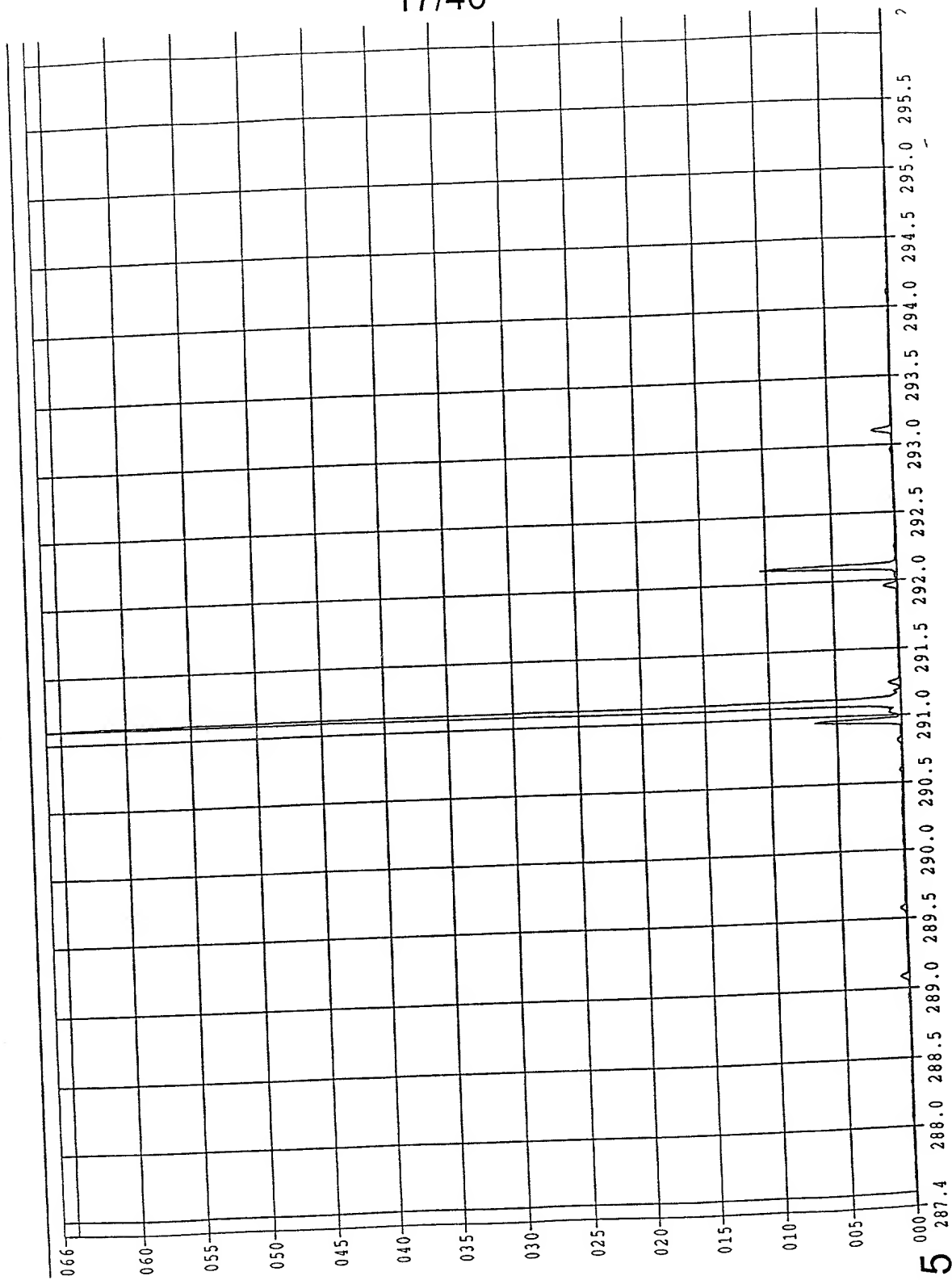


Fig. 15

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[Mass Spectrum]
 Data : BYU_A776
 Sample : 1
 Note :
 Inlet : Direct Ion Mode : EI+
 Spectrum Type : Normal Ion [MF-Linear]
 RT : 0.64 min Scan# : (5,8)
 BP : m/z 140.0000 Int. : 135.19
 Output m/z range : 50.0000 to 362.6855 Cut Level : 0.00 %

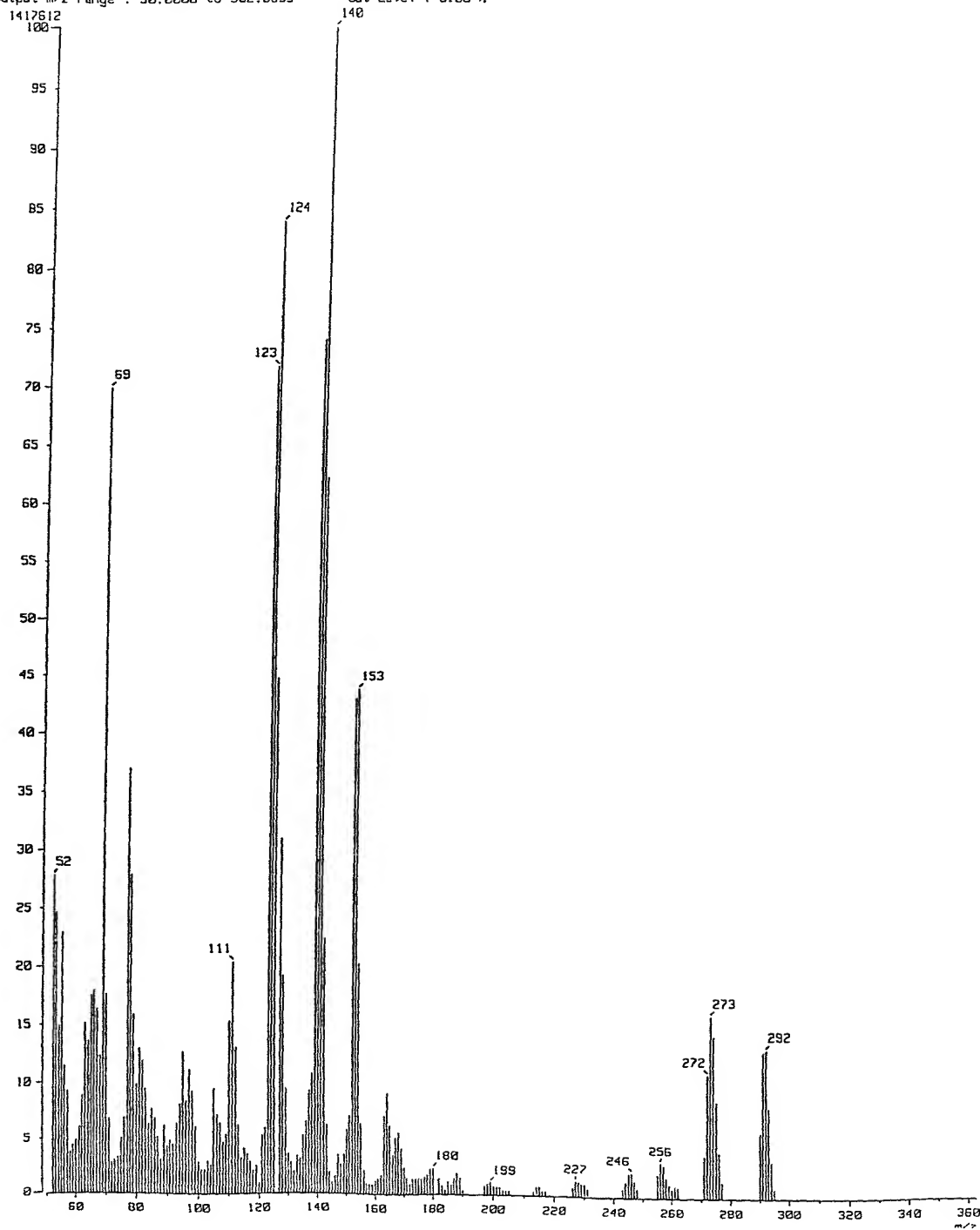


Fig. 16

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[Mass Spectrum]
 Data : BYU f1349
 Sample: acylated 1
 Note ThioGlycerol & Na
 Inlet : Direct Ion Mode : FIB+
 Spectrum Type : Normal Ion (MF-Linear)
 RT : 0.08 min Scan# : (1,4)
 BP : m/z 523.0000 Int. : 322.38
 Output m/z range : 240.0000 to 642.3739 Cut Level : 0.00 %

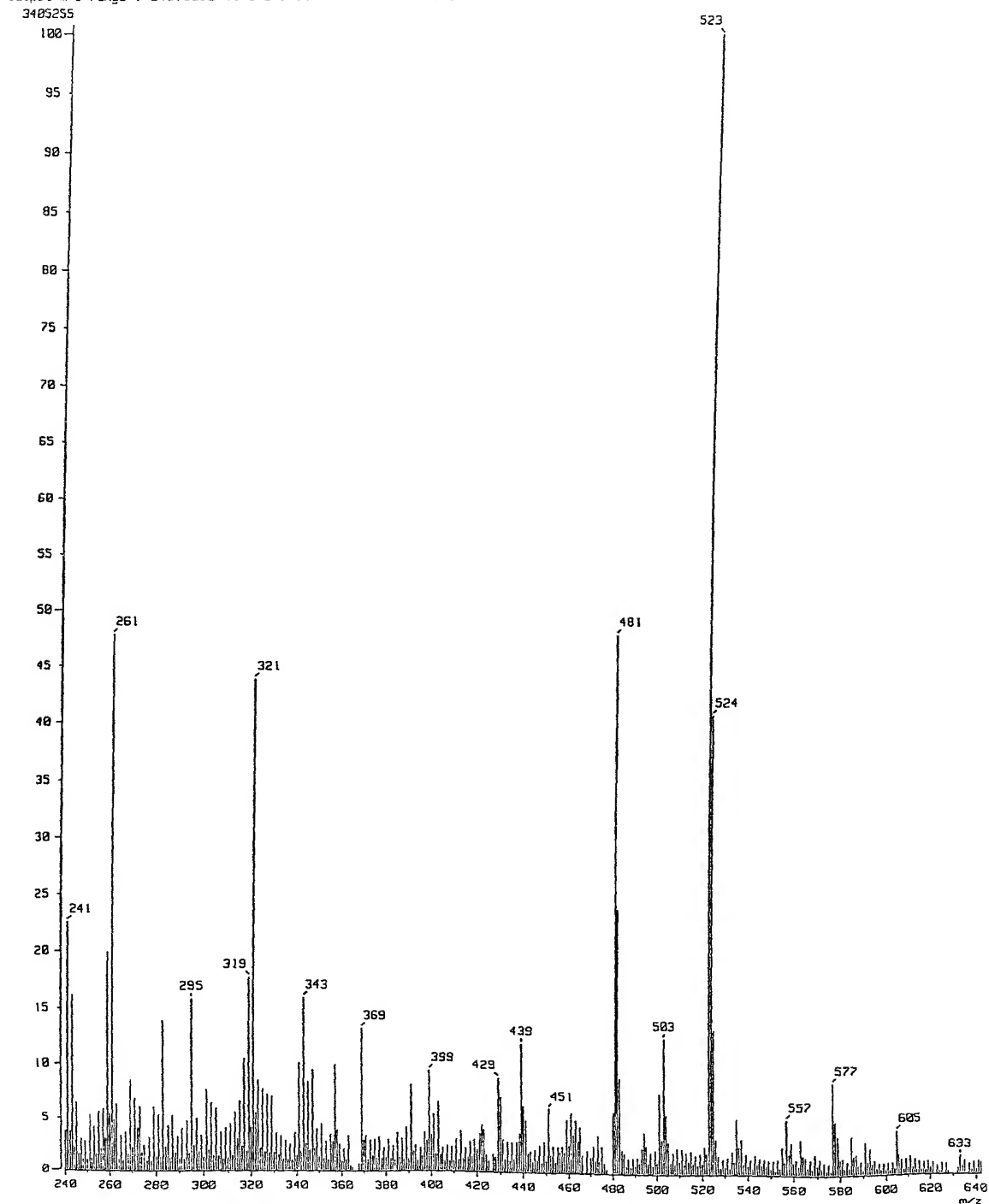


Fig. 17

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[Mass Spectrum]
Data : BYU F373
Sample: acylated-1
Note :
Inlet : Direct Ion Mode : EI+
Spectrum Type : Normal Ion [MF-Linear]
RT : 0.89 min Scan# : (7,9)-k((3,4))[k=1.0]
BP : m/z 398.0000 Int. : 68.70
Output m/z range : 50.0000 to 564.0950 Cut Level : 0.00 %

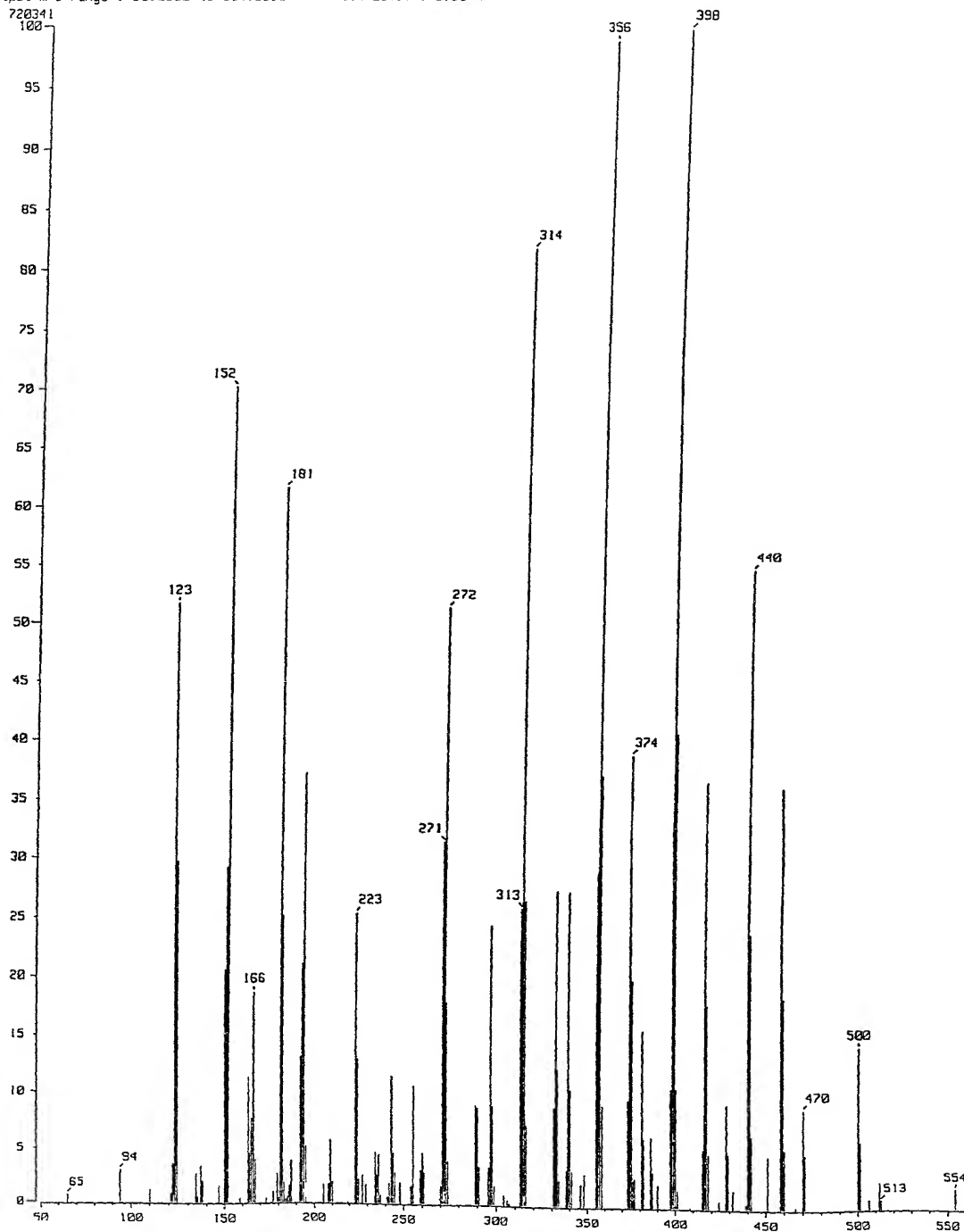


Fig. 18

H1 of sample

Pulse Sequence: #2pul

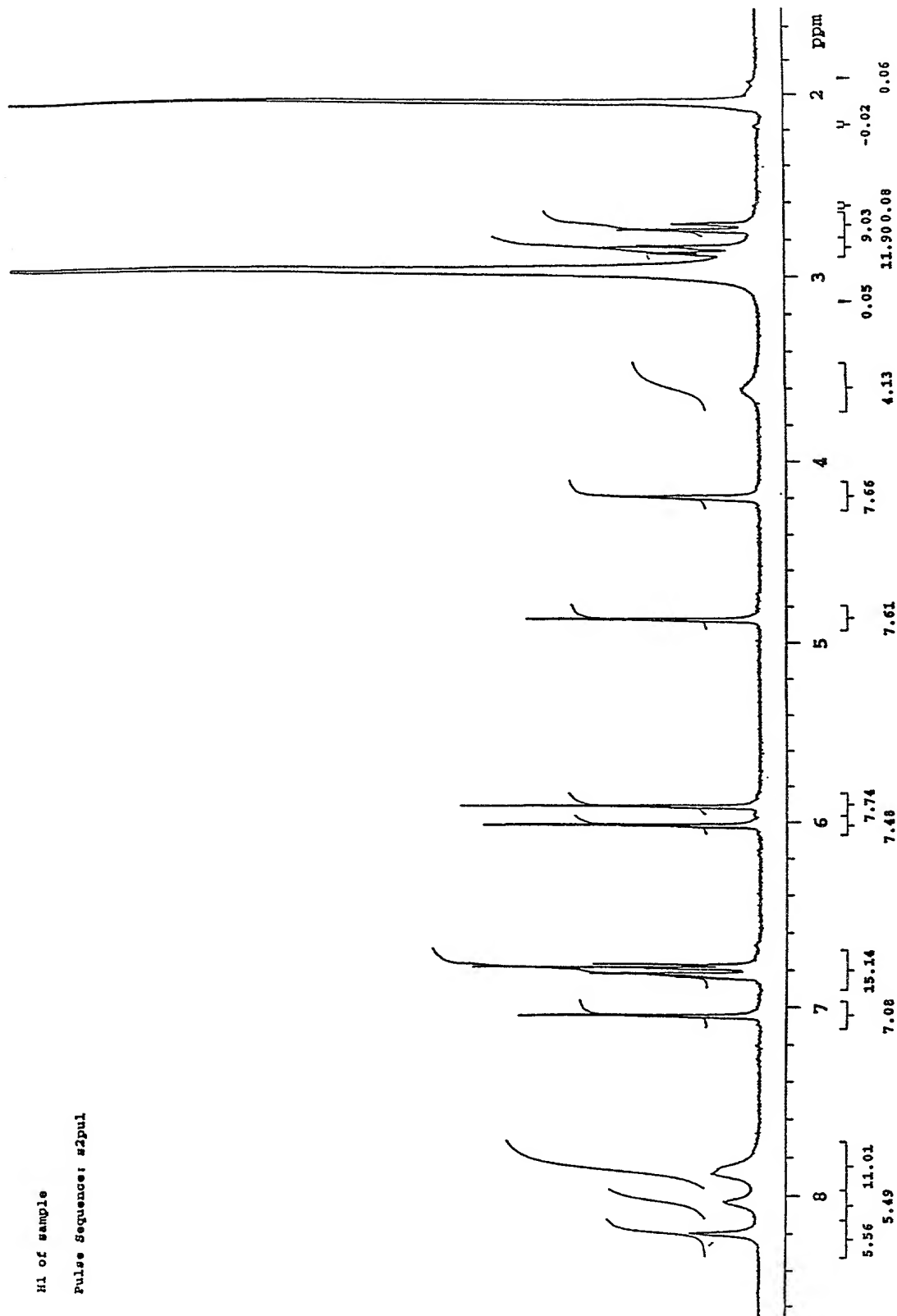
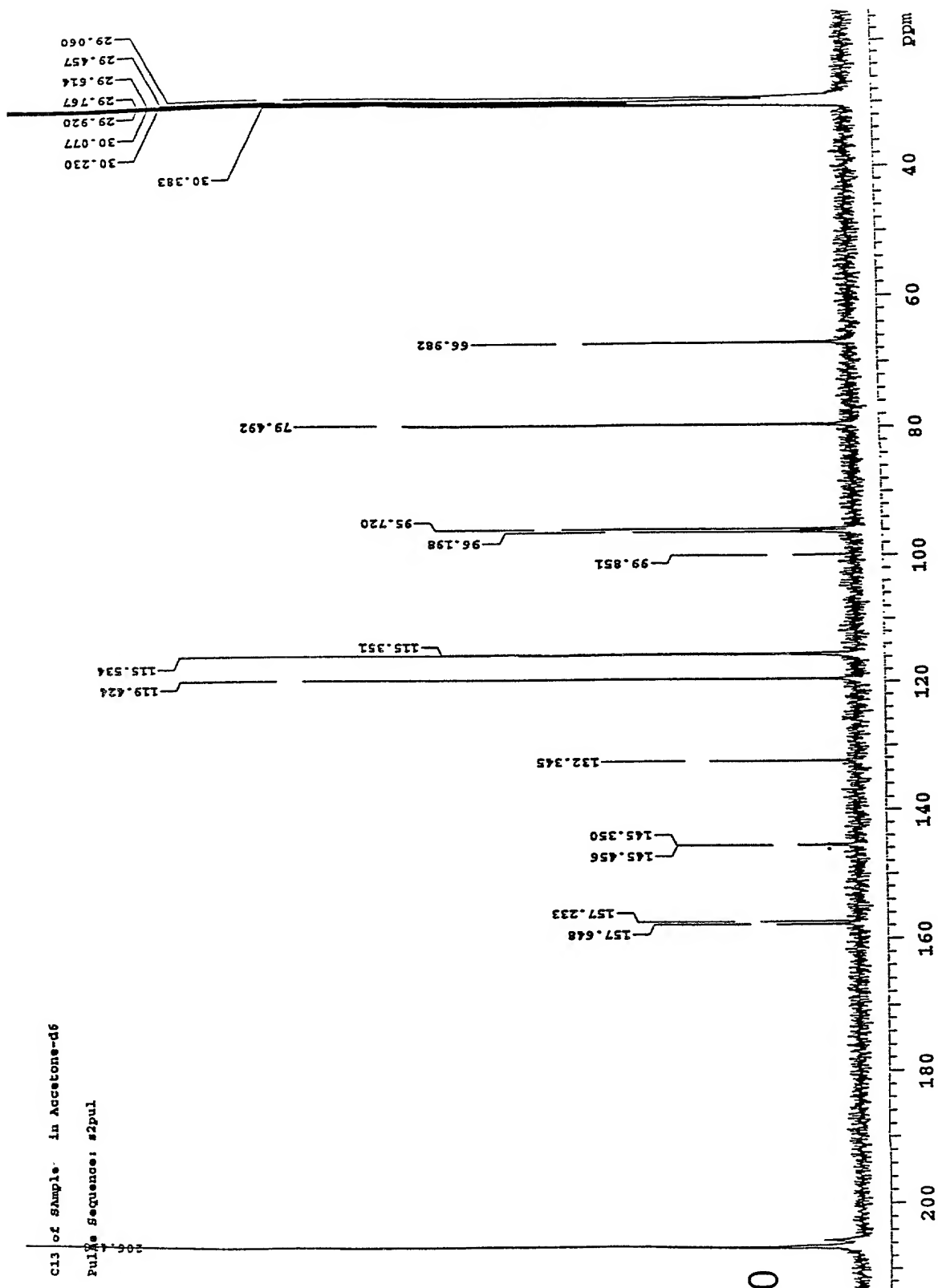


Fig. 19

[illegible]

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TH

Pulse Sequence: s2pul

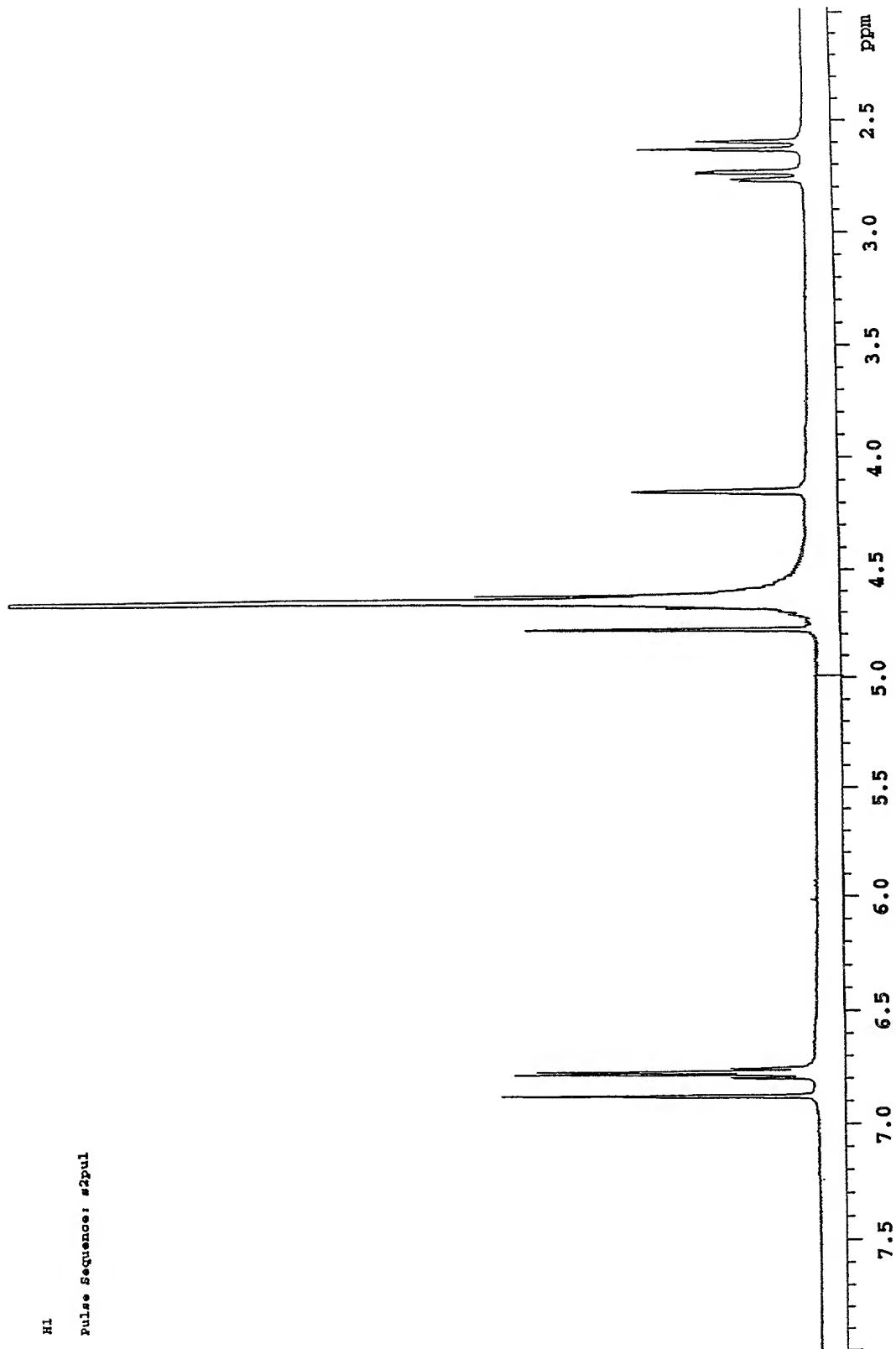


Fig. 21

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C13 of Sample in D2O.

Pulse Sequence: #2pul

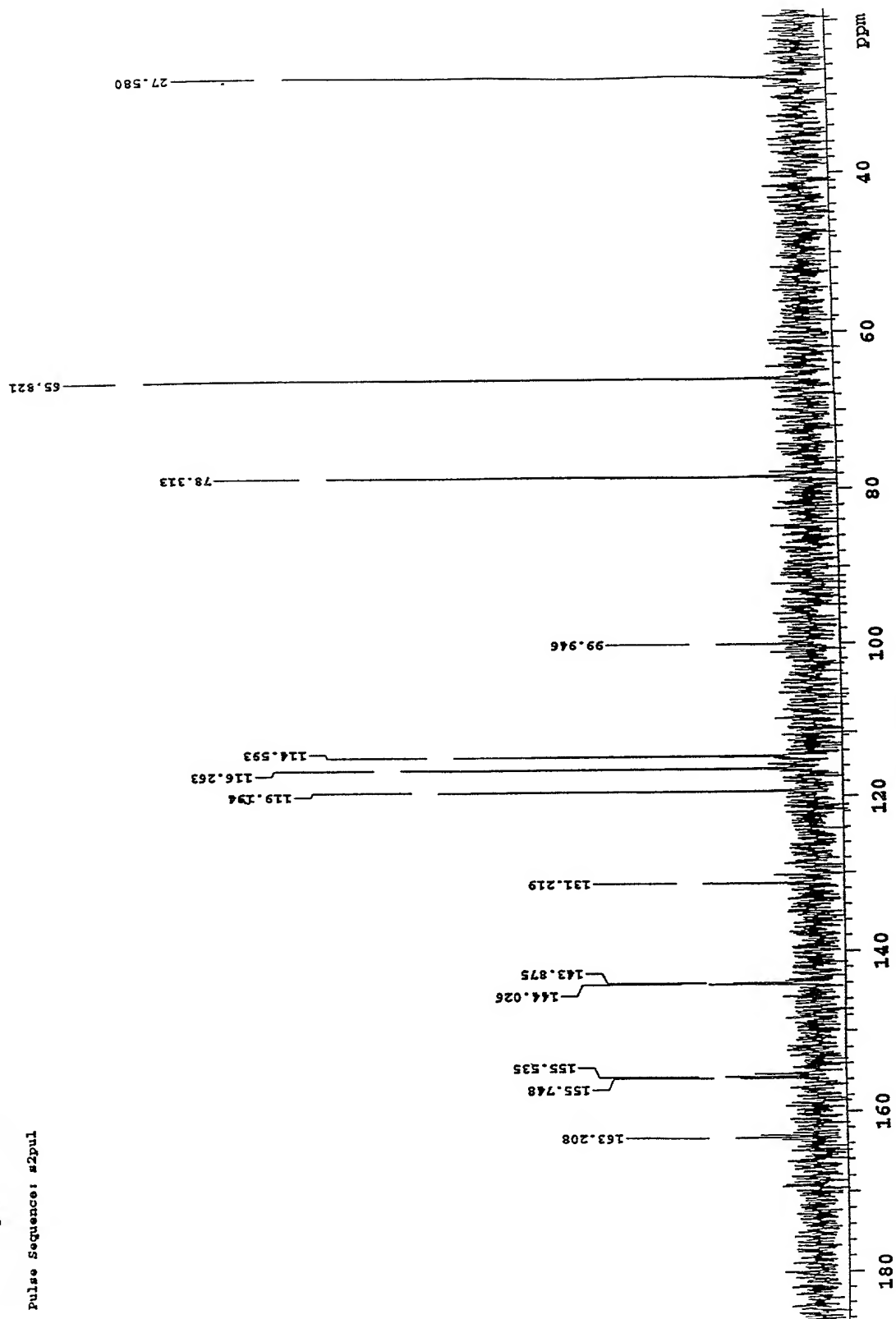
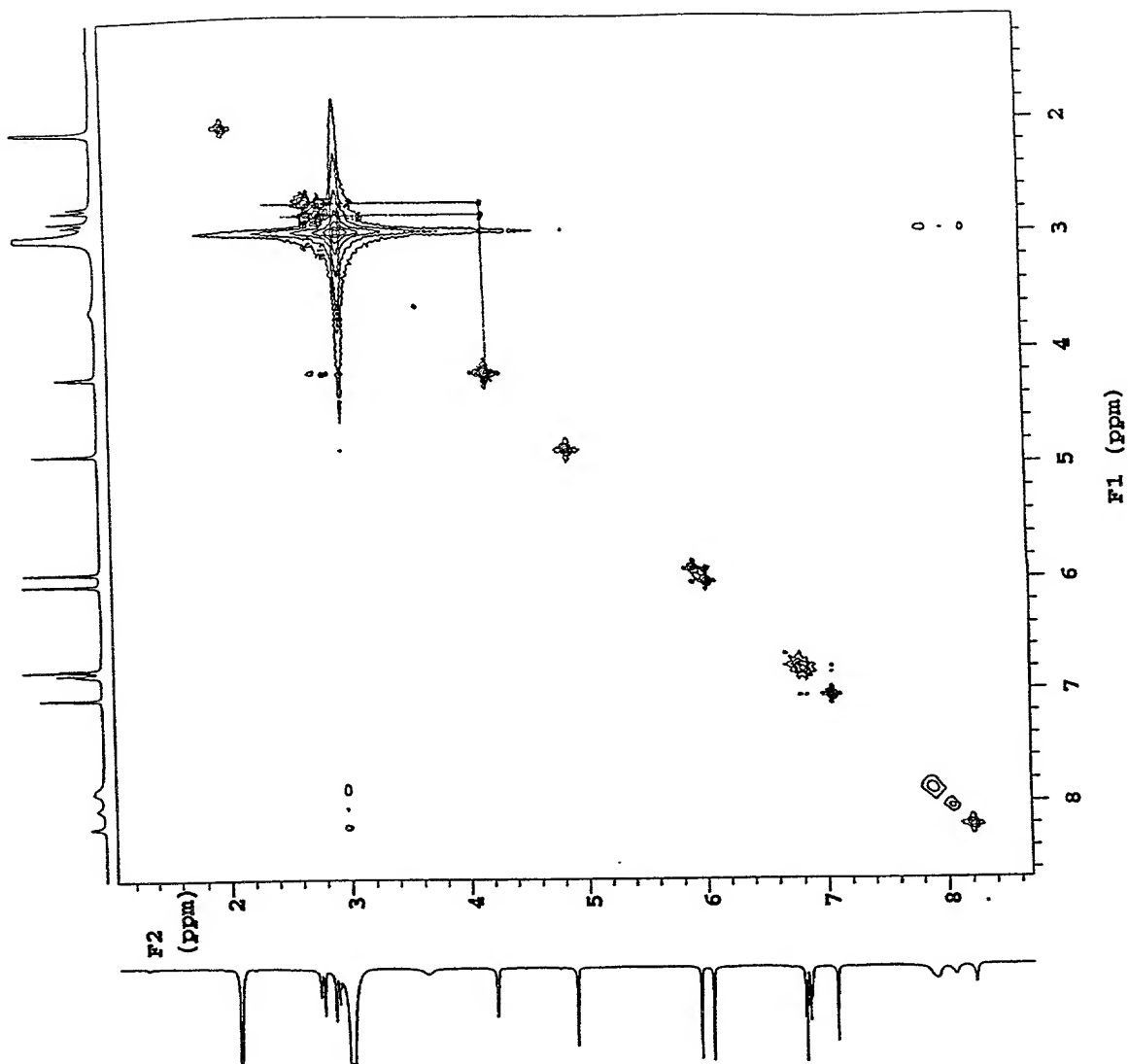


Fig. 22



COSY of Sample

Pulse Sequence: relayh

Solvent: Acetone

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

COSY 90-90

Acq. time 0.302 sec

Width 3817.5 Hz

2D Width 3817.5 Hz

16 repetitions

159 increments

OBSERVE H1, 499.8814428 MHz

DATA PROCESSING

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 1024 x 1024

Total time 14 min, 12 sec

Fig. 23

COSY
 Pulse Sequence: relayh
 Solvent: D2O
 Ambient temperature
 UNITY-500 "nmr500"
 PULSE SEQUENCE: relayh
 Relax. delay 0.500 sec
 COSY 90-90
 Acq. time 0.178 sec
 Width 2882.3 Hz
 2D Width 2882.3 Hz
 8 repetitions
 120 increments
 OBSERVE H1, 499.8801324 MHz
 DATA PROCESSING
 Line broadening 0.1 Hz
 F1 DATA PROCESSING
 Line broadening 0.3 Hz
 FT size 1024 x 1024
 Total time 11 min, 23 sec

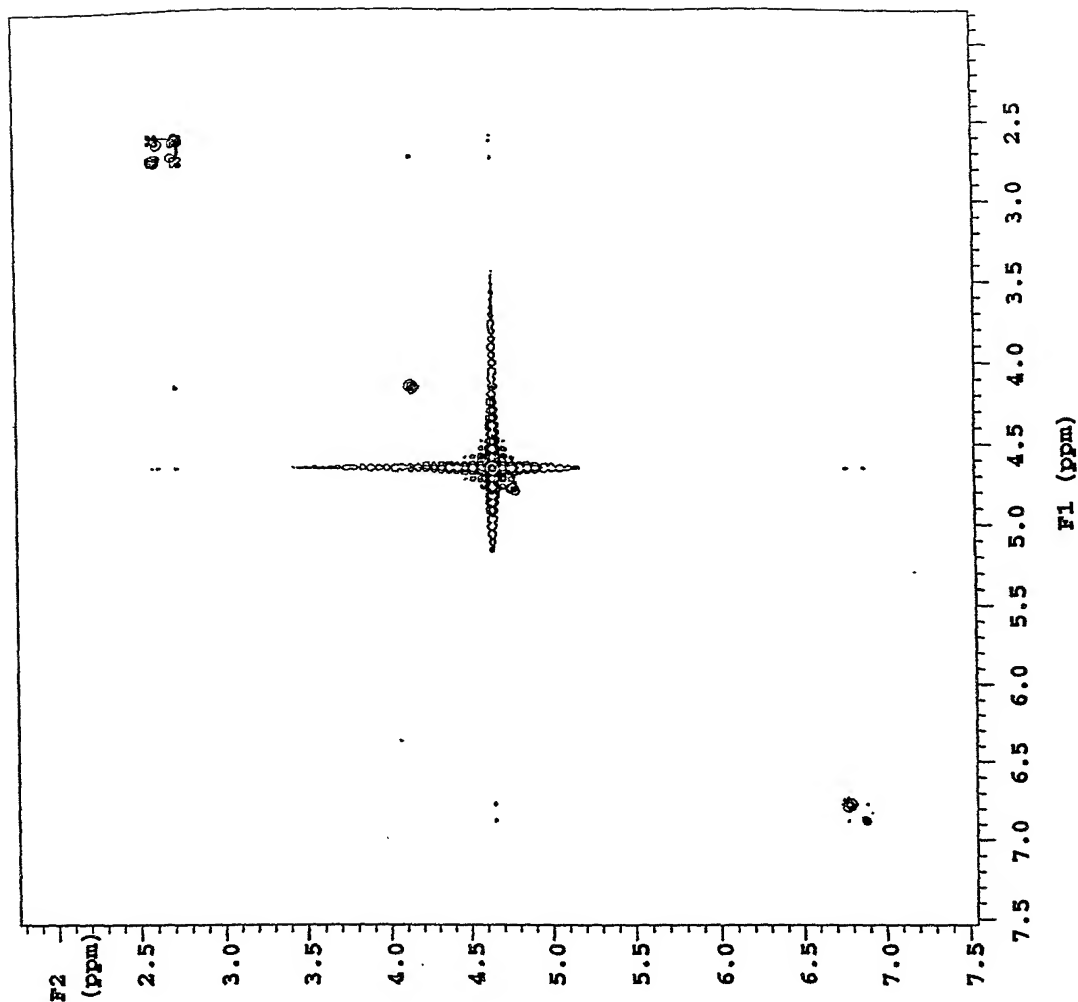


Fig. 24A

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202090-535007

COSY

Pulse Sequence: relayh

Solvent: D2O

Ambient temperature

UNITY-500 "nmr-500"

PULSE SEQUENCE: relayh

Relax. delay 0.500 sec

COSY 90-90

Acq. time 0.178 sec

Width 2882.3 Hz

2D Width 2882.3 Hz

8 repetitions

120 increments

OBSERVE H1, 499.8801324 MHz

DATA PROCESSING

Line broadening 0.1 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 1024 x 1024

Total time 11 min, 23 sec

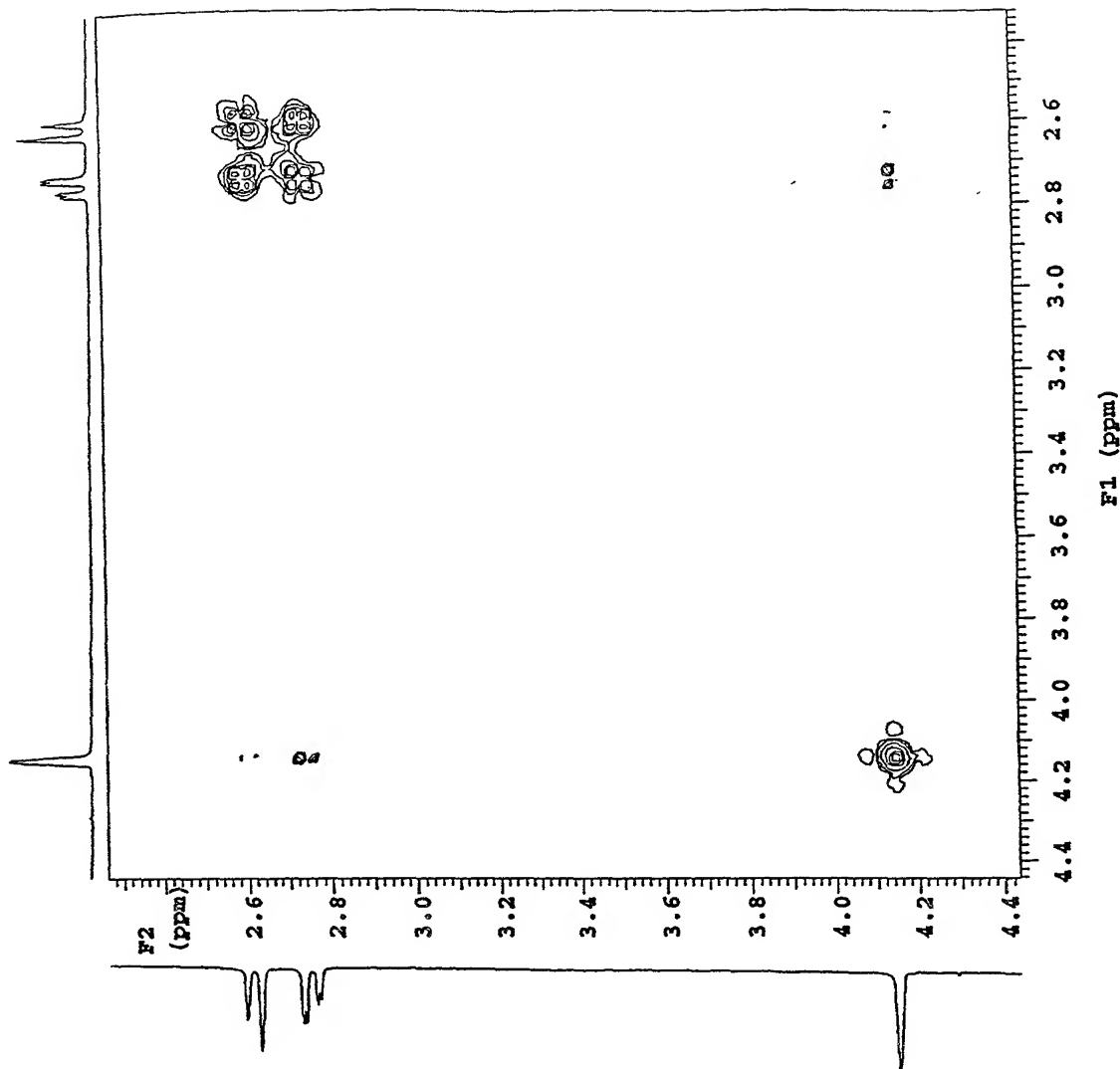
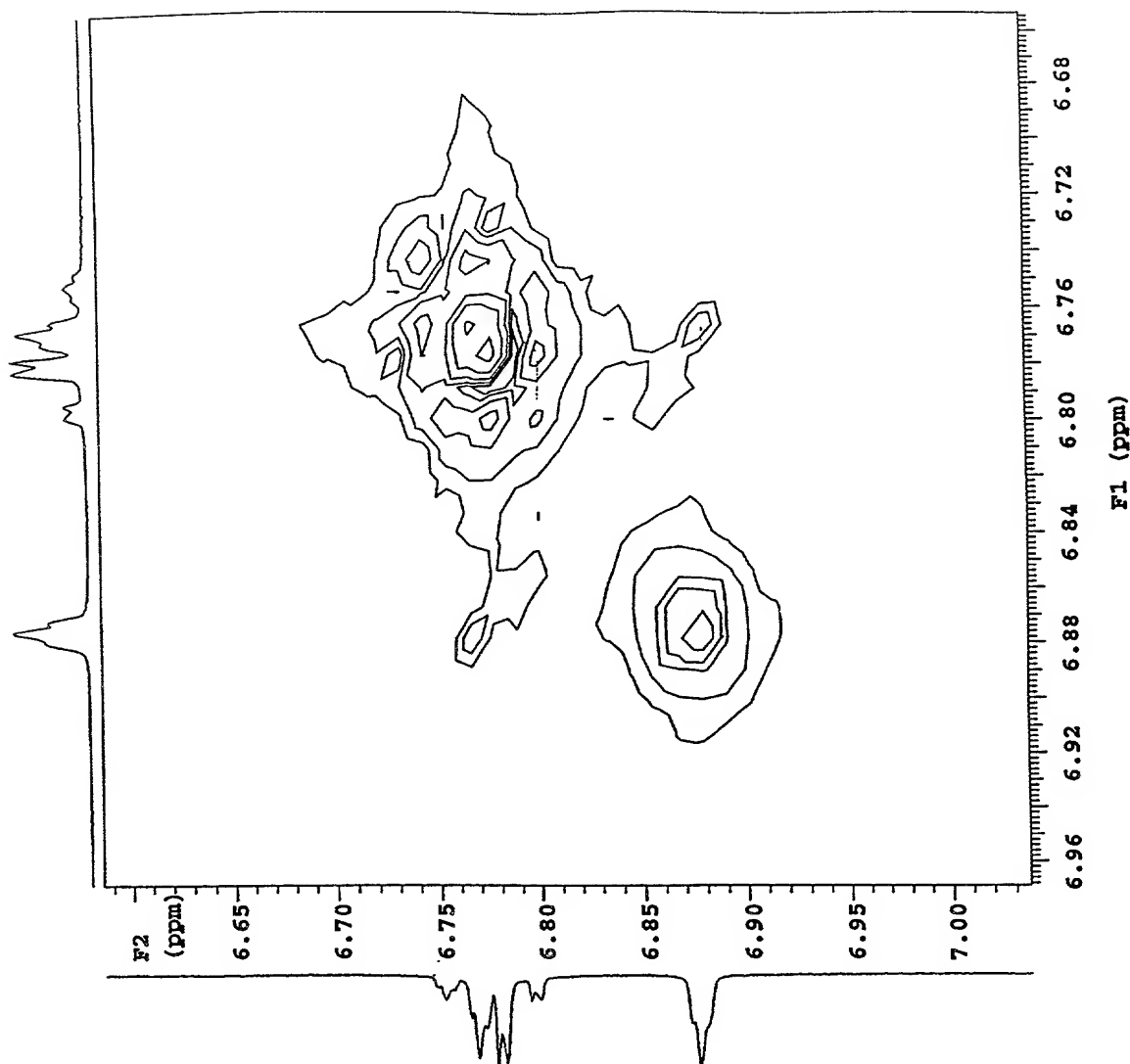


Fig. 24B



COSY

Pulse Sequence: relayh

Solvent: D2O

Ambient temperature

UNITY-500 "nmr500"

PULSE SEQUENCE: relayh

Relax. delay 0.500 sec

COSY 90-90

Acq. time 0.178 sec

Width 2882.3 Hz

2D Width 2882.3 Hz

8 repetitions

120 increments

OBSERVE H1, 499.8801324 MHz

DATA PROCESSING

Line broadening 0.1 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 1024 x 1024

Total time 11 min, 23 sec

Fig. 24C

2020507 5050001

M1 of 1 Acetylated in CDCl3

Pulse Sequence: s2pul

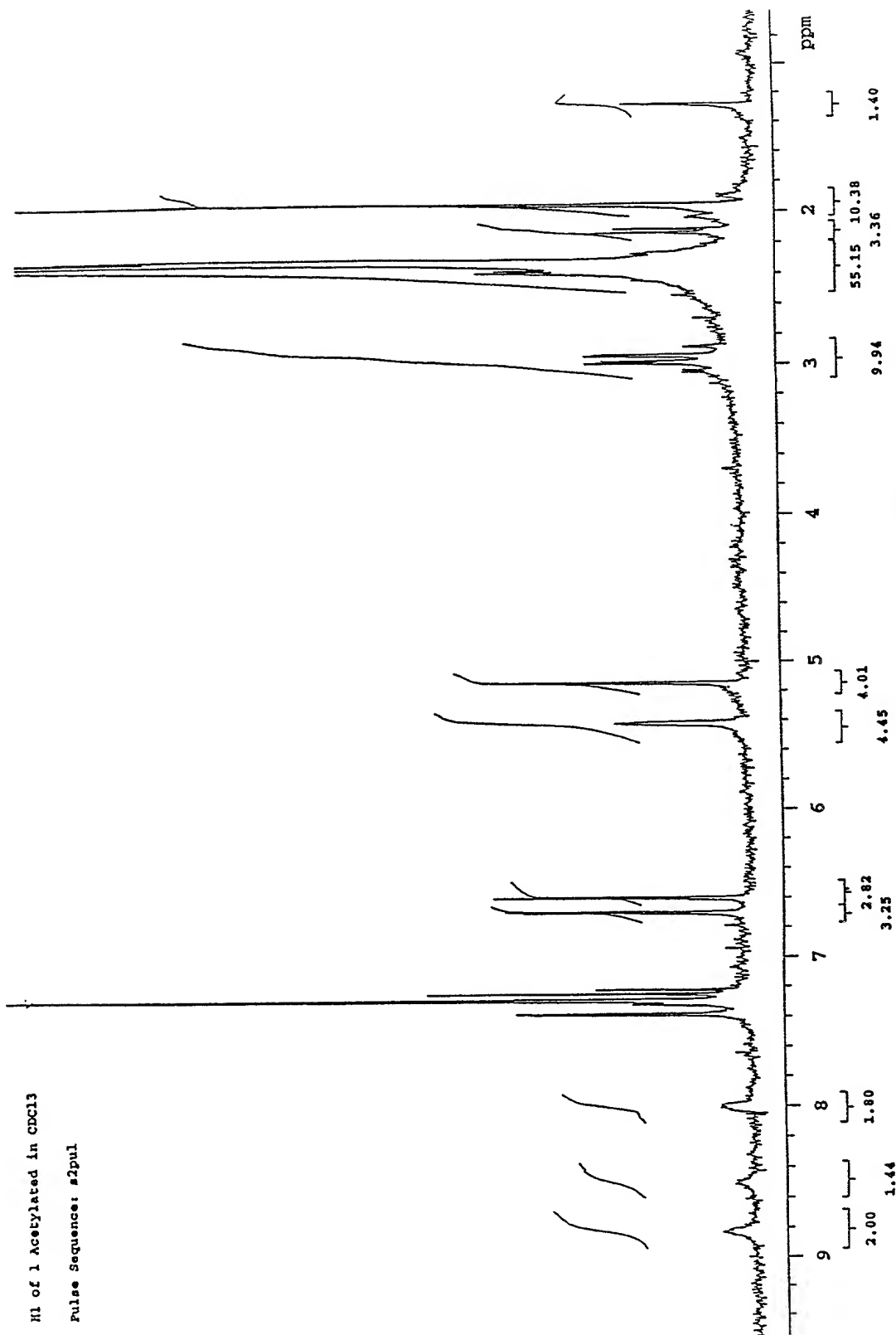
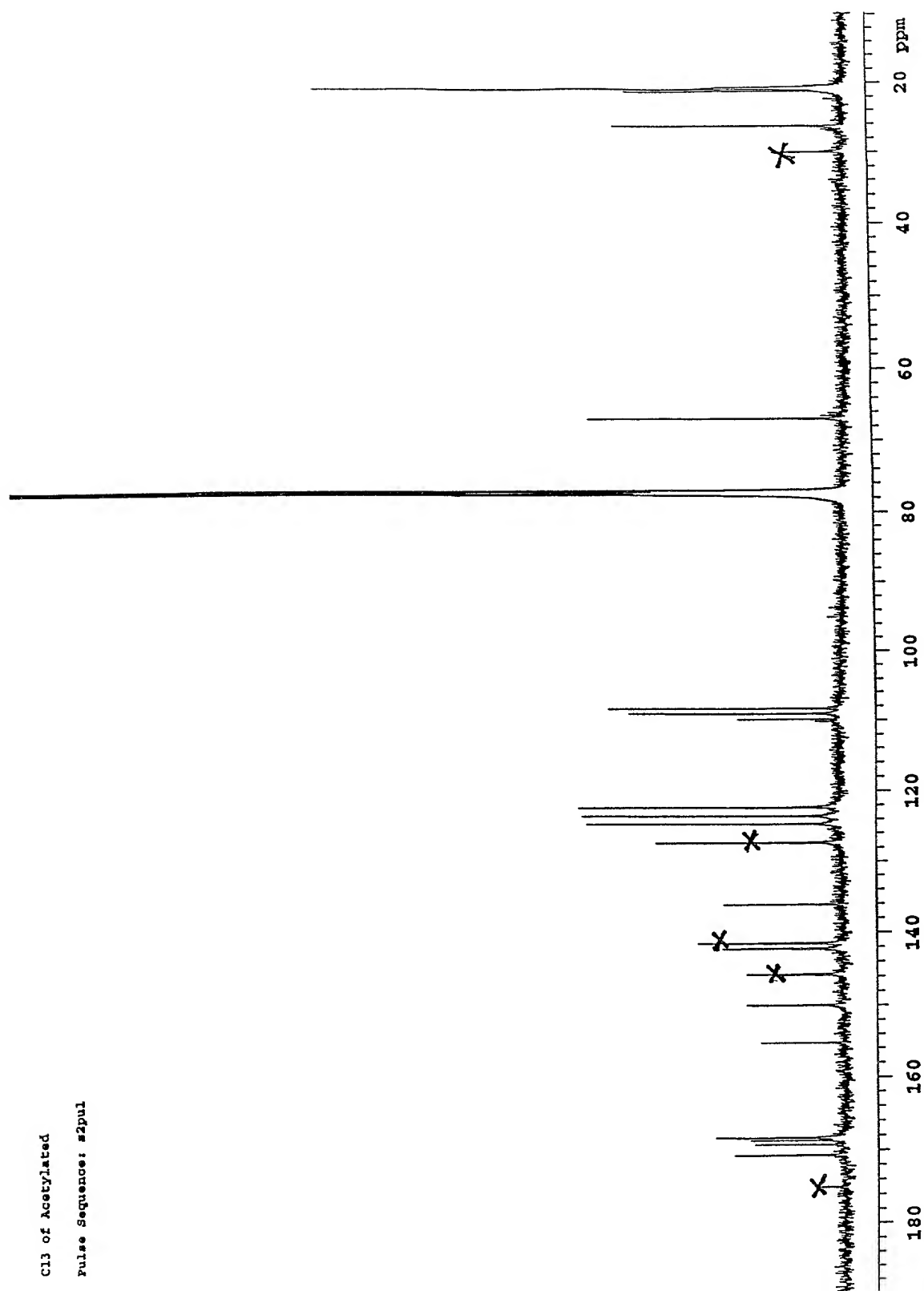


Fig. 25

202690 3696508

C13 of Acetylated
Pulse Sequence: #2pul

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X=pyridinium acetate

Fig. 26

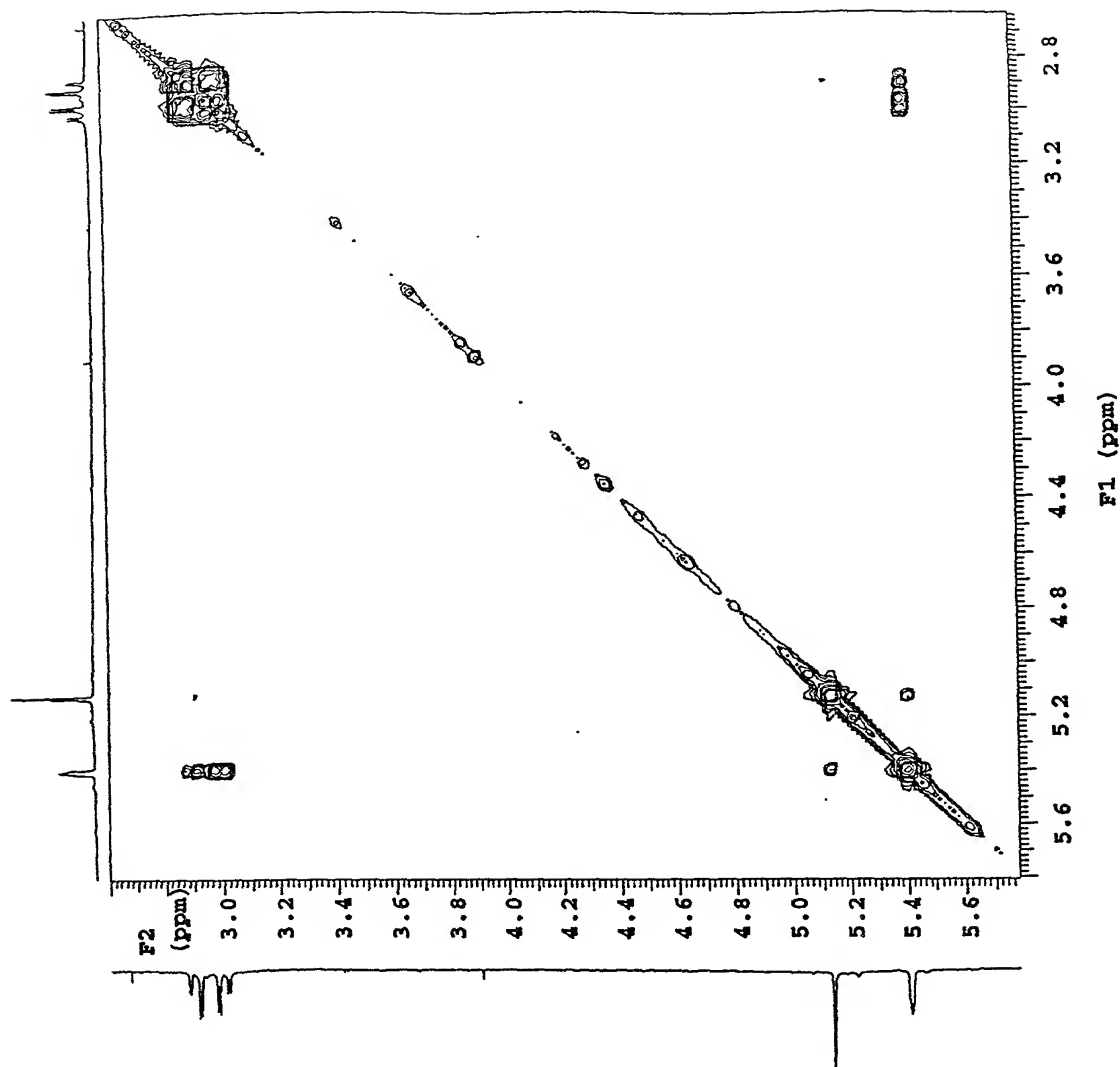


Fig. 27

HETCOR of Acetylated . in CDCl₃.

Pulse Sequence: hetcor

Solvent: CDCl₃

Temp. 26.0 C / 299.1 K

User: 1-14-87

INOVA-500 "pmx500"

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.7033376 MHz

DECOUPLE H1, 499.9160715 MHz

Power 38 dB

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 4096 x 1024

Total time 16 hr, 46 min, 21 sec

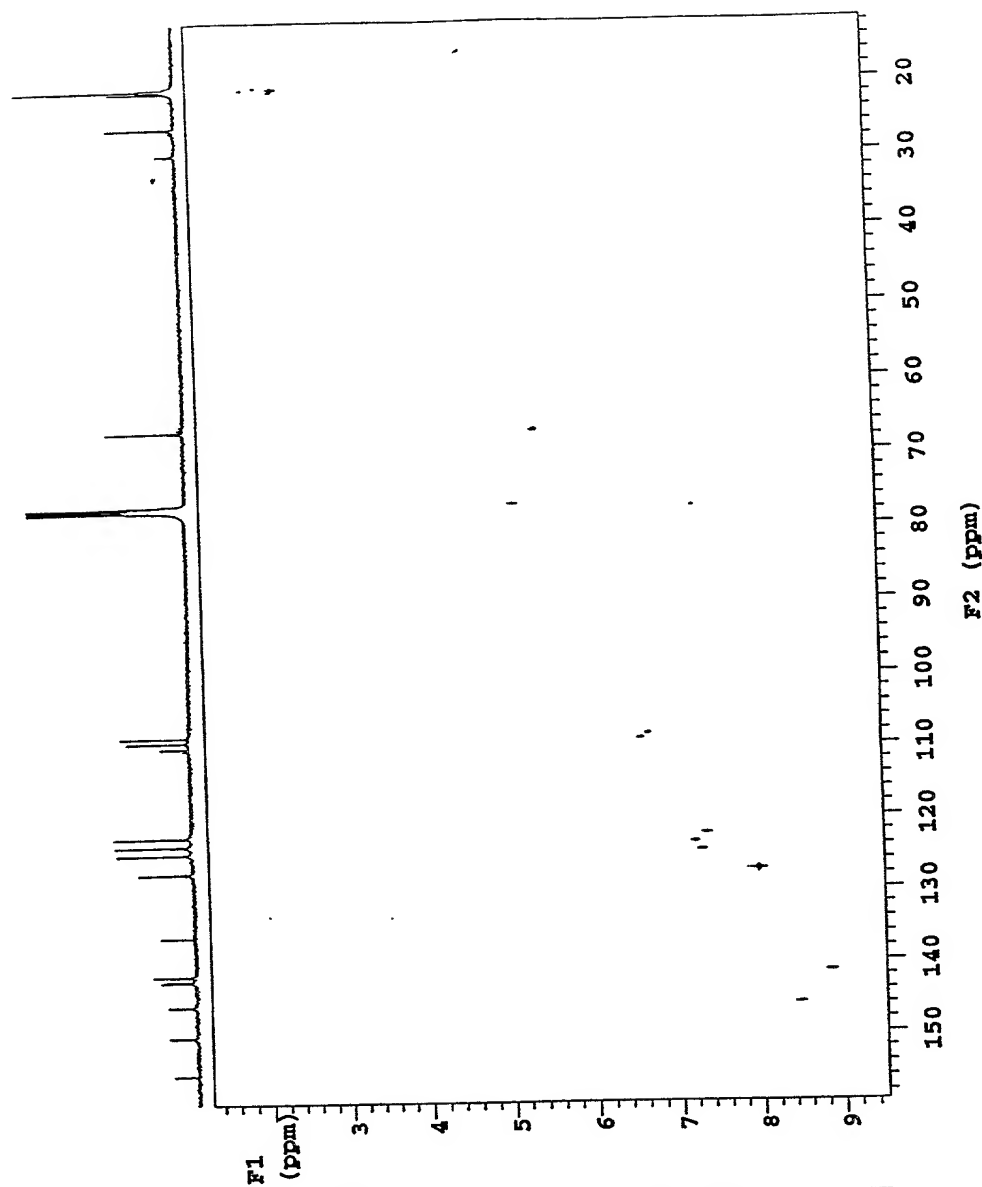


Fig. 28A

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HETCOR of Acetylated in CDCl₃.

Pulse Sequence: hetcor

Solvent: CDCl₃

Temp. 26.0 C / 299.1 K

User: 1-14-87

INNOVA-500 *nmr500*

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.7033376 MHz

DECOUPLE H1, 499.9160715 MHz

Power 38 dB

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 4096 x 1024

Total time 16 hr, 46 min, 21 sec

X=pyridinium acetate

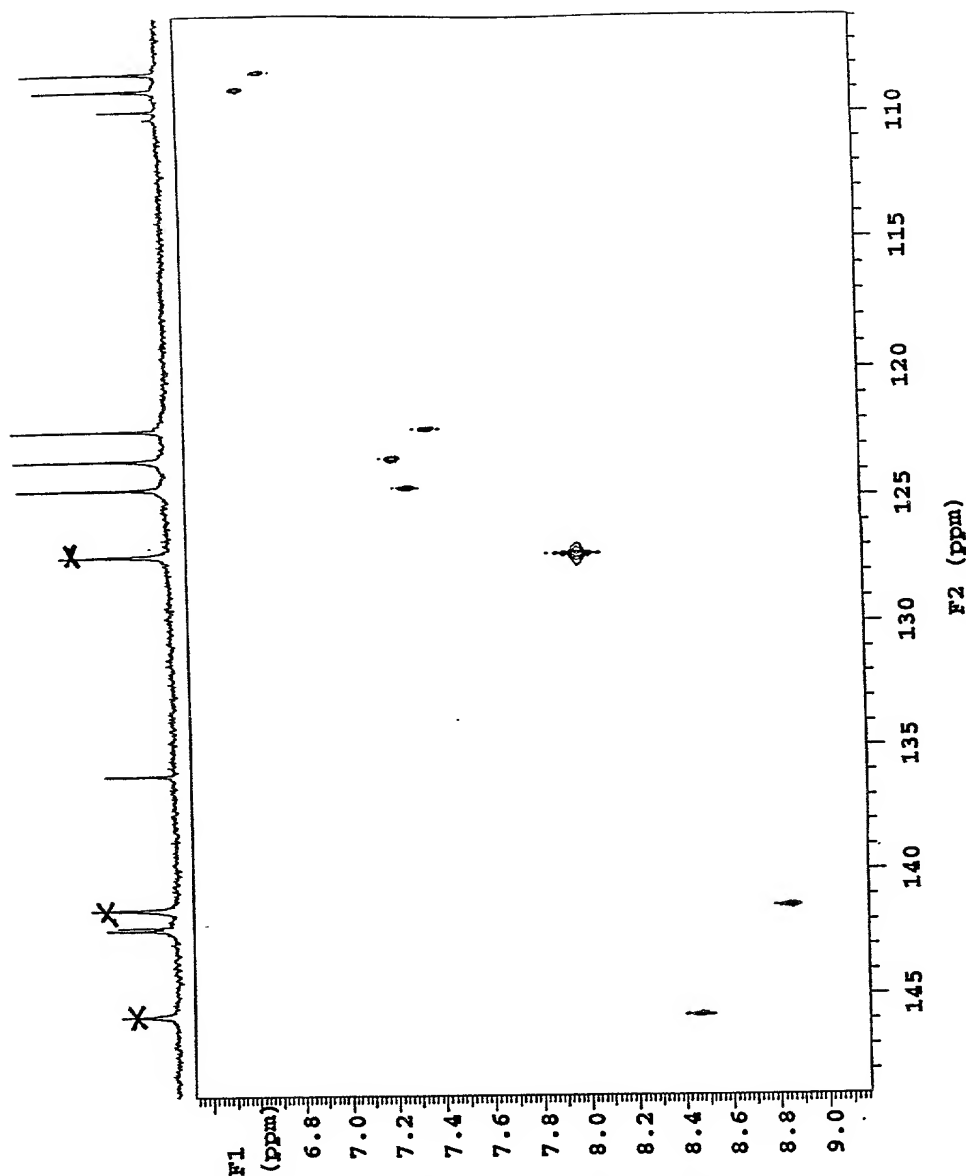


Fig. 28B

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HETCOR of acetylated in CDCl₃.

Pulse Sequence: hetcor

Solvent: CDCl₃

Temp: 26.0 C / 299.1 K

User: 1-14-87

INOVA-500 "nmr500"

Relax. delay 1.000 sec

Acq. time 0.082 sec

Width 25000.0 Hz

2D Width 4614.9 Hz

208 repetitions

256 increments

OBSERVE C13, 125.7033376 MHz

DECOUPLE H1, 499.9160715 MHz

Power 38 db

on during acquisition

off during delay

WALTZ-16 modulated

DATA PROCESSING

Line broadening 2.0 Hz

F1 DATA PROCESSING

Line broadening 0.3 Hz

FT size 4096 x 1024

Total time 16 hr, 46 min, 21 sec

X=pyridinium acetate

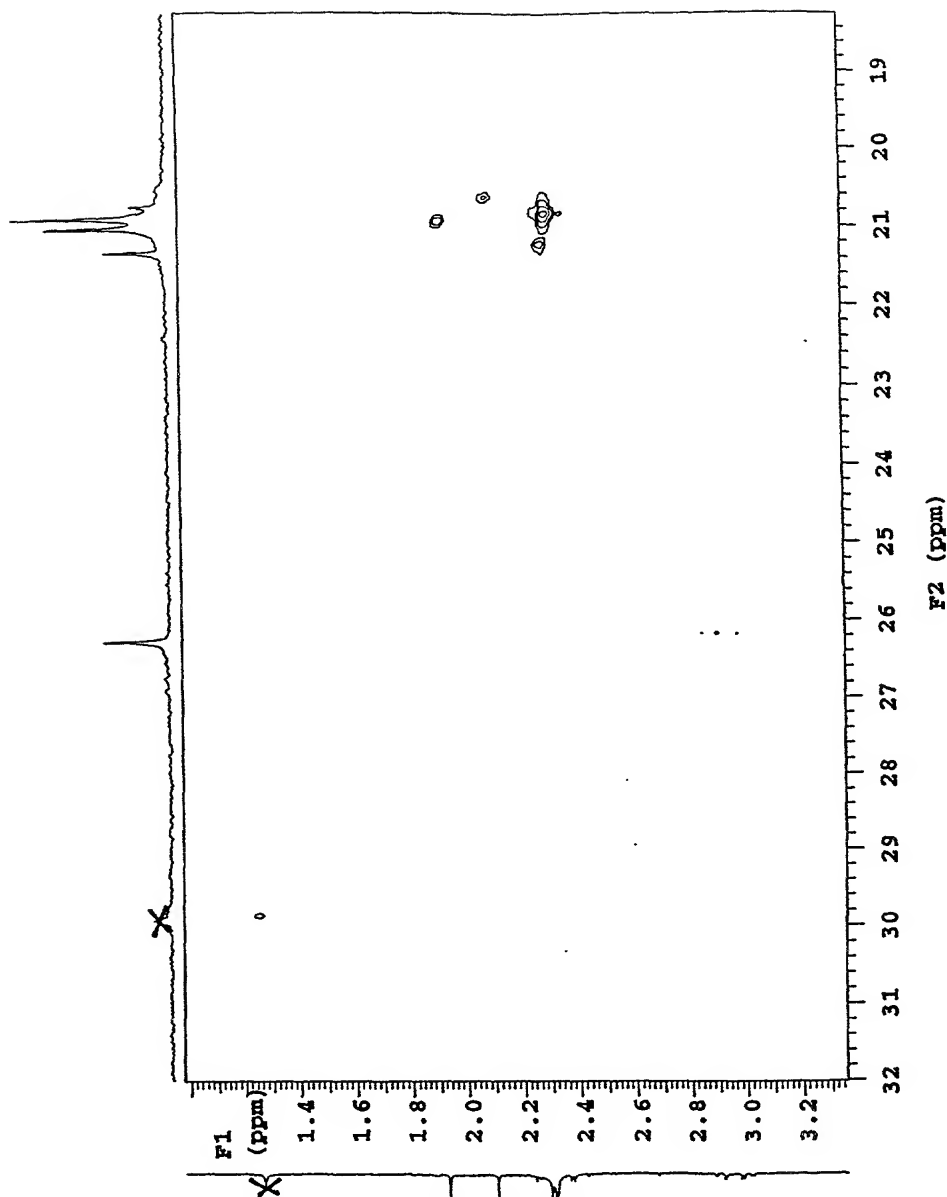


Fig. 28C

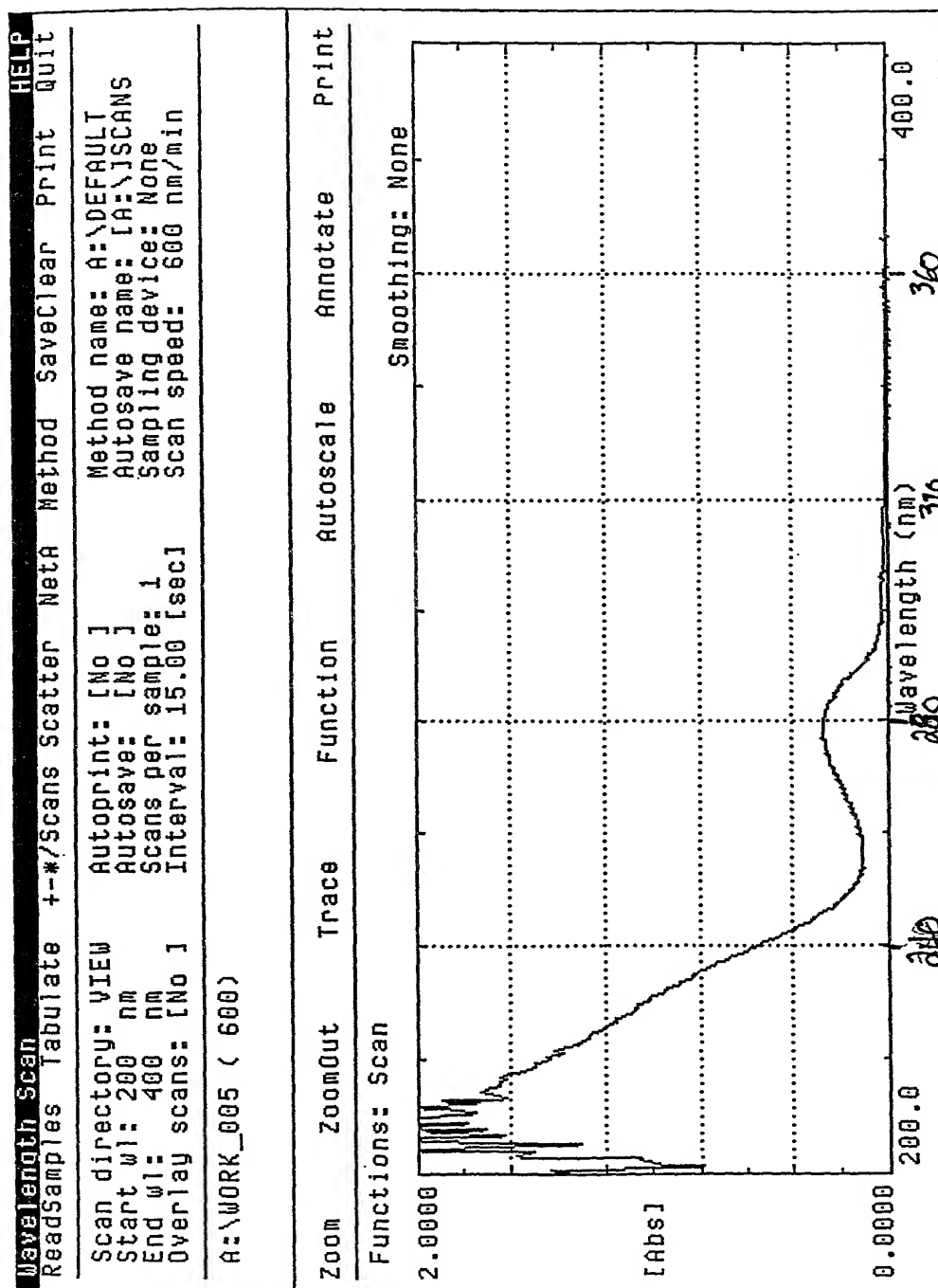


Fig. 29

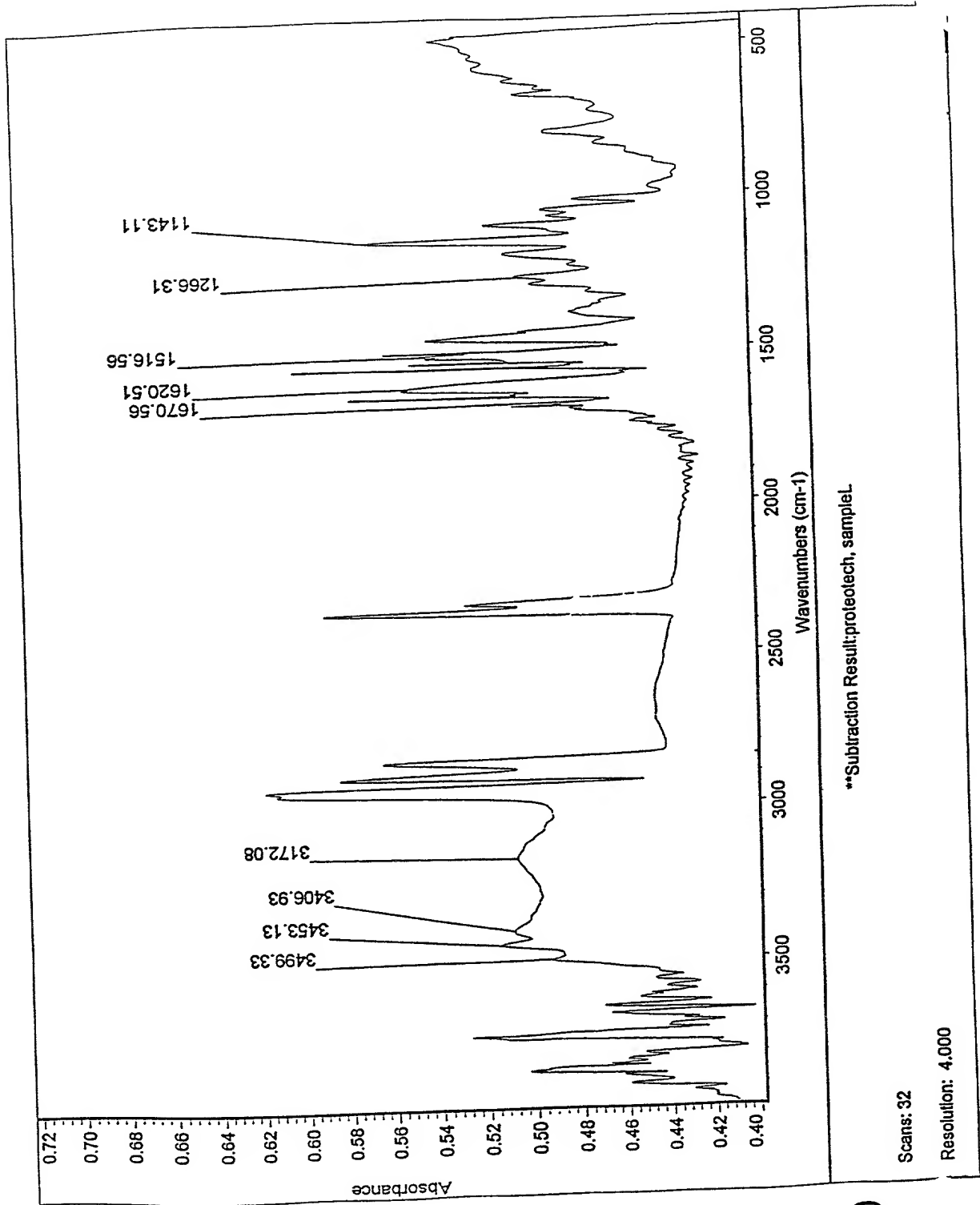


Fig. 30

202090-5292500T

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Aromatic Alcohols and Phenols

Aldrich 85,523-5 CAS 1490-48-7
 (-)-Epicatechin, 97%
 $C_{15}H_{14}O_6$ FT-IR: ν , 11200
 FW 280.27
 mp 240°C d.

A

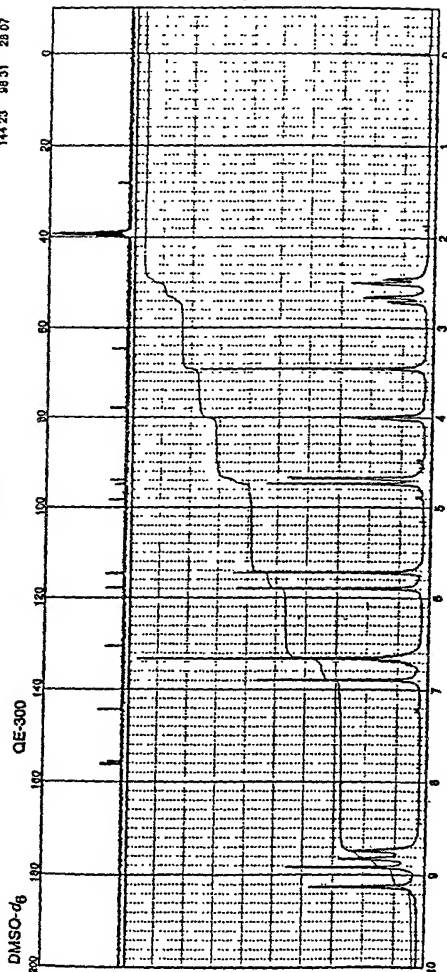
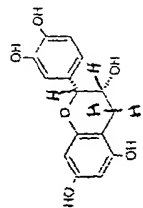


Fig. 31A



C

Aldrich 86,181-2
 (±)-Catechin hydrate, 98%
 $C_{15}H_{14}O_6$
 FW 280.28
 mp 210°C d.

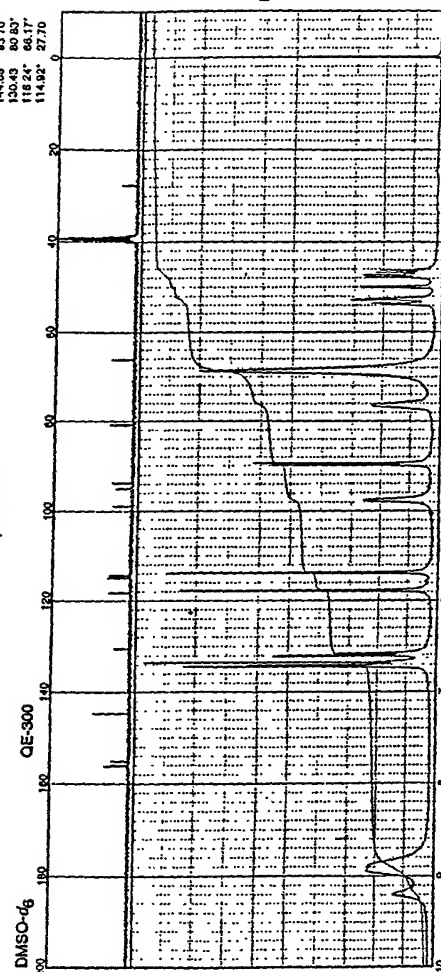
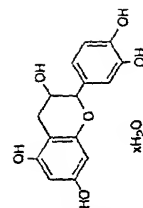


Fig. 31B



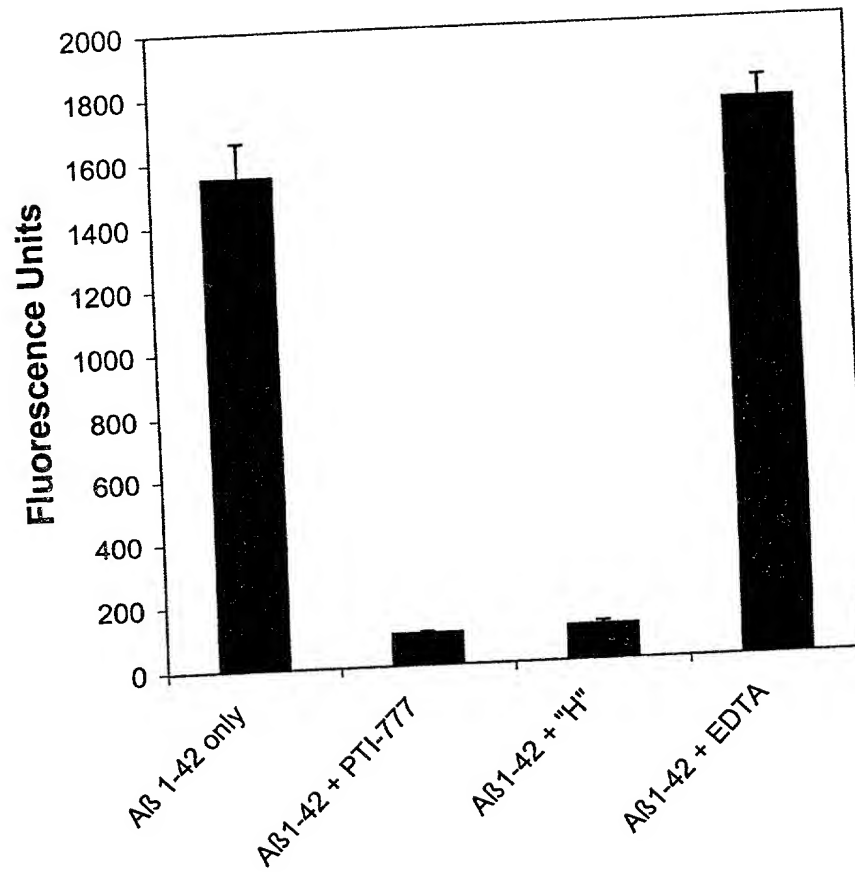


Fig. 33

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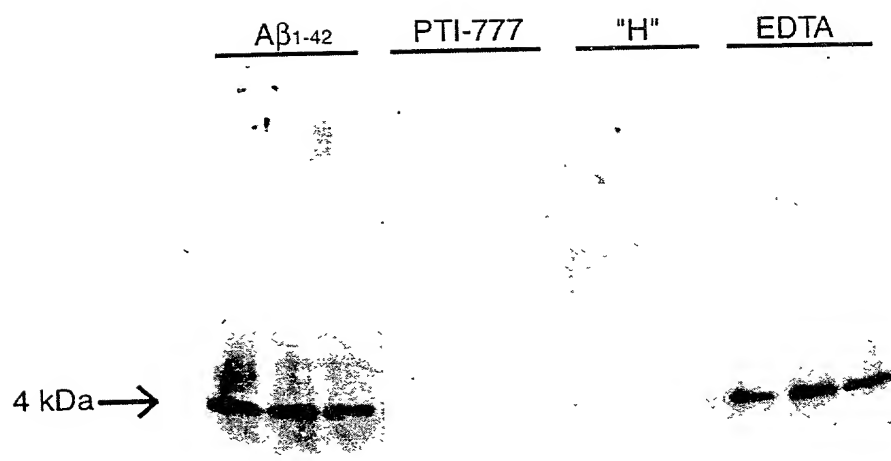


Fig. 34